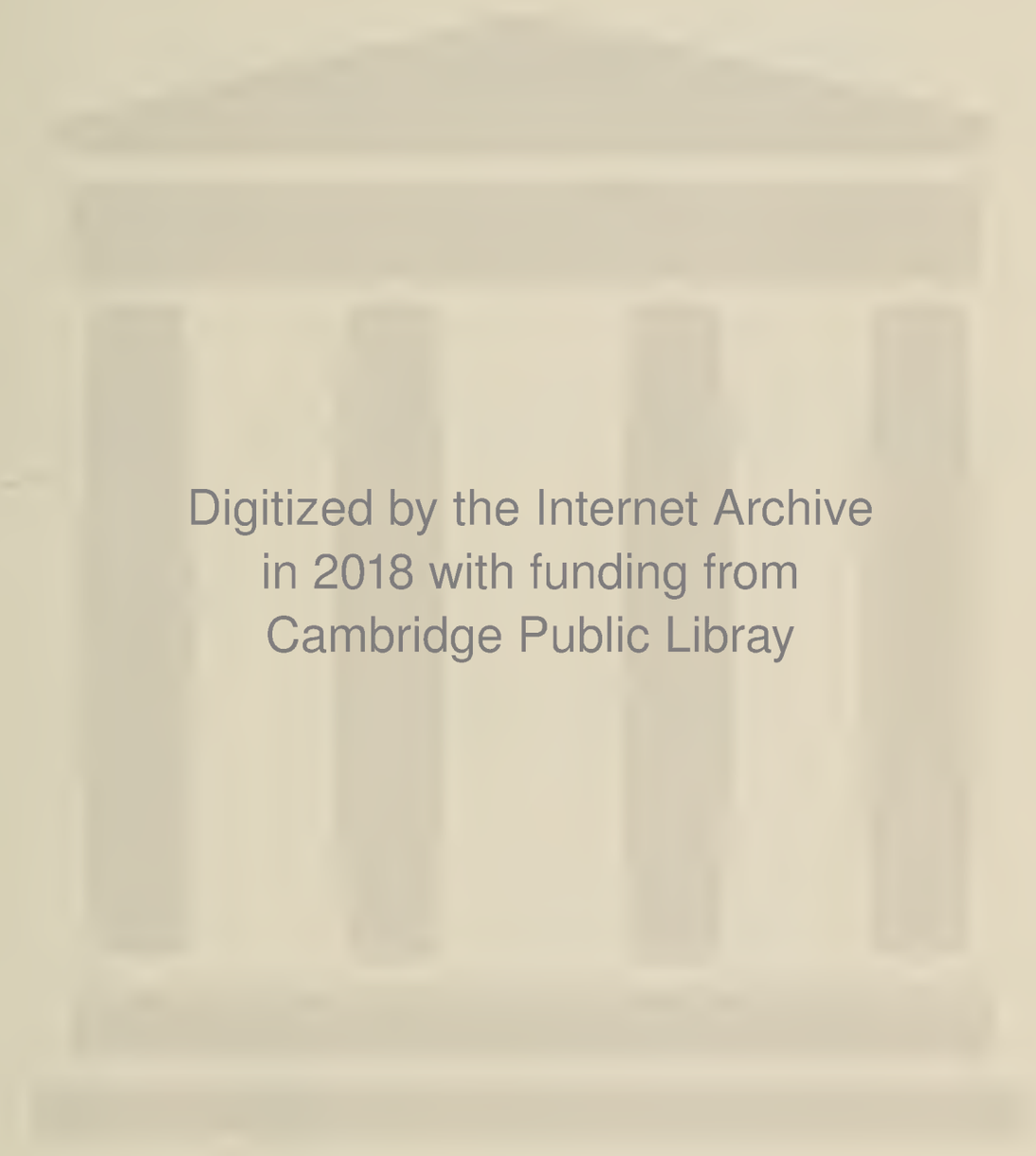

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City of Cambridge

THE MAYOR'S ADDRESS

AT THE

ORGANIZATION OF THE CITY GOVERNMENT

JANUARY 2, 1899

AND

THE ANNUAL REPORTS

MADE TO THE CITY COUNCIL

FOR THE YEAR 1898

PUBLISHED BY ORDER OF THE CITY COUNCIL
UNDER THE DIRECTION OF THE
CITY CLERK

Press of
Caustic & Claflin,
Cambridge.

ADDRESS

OF

HON. EDGAR R. CHAMPLIN

MAYOR

TO THE

CITY COUNCIL

January 2, 1899

Gentlemen of the City Council: —

To-day solemn obligations and serious responsibilities are assumed. That our fellow-citizens have given expression to their confidence by assigning to us the performance of these duties is a sufficient inspiration to evoke the best within us. For our recompense we must await the verdict of our conscience when the events of the new year shall have been marshalled for review.

For a half century, upon similar occasions, the Mayors have availed themselves of the opportunities afforded by inauguration days to express their views upon municipal matters, to outline their policy and to some extent, in an abridged form, to reproduce the reports of the various departments, until in recent years such a course has become a somewhat established feature. That a partial departure from this custom may not be misinterpreted the reasons with propriety may be stated. First. The reports of the various departments are replete with information essential to a proper understanding of the needs of our City, and no member of the City Council can render his best judgment upon the affairs to come before him unless fully equipped with all the knowledge available upon these subjects. The Mayor's digest would furnish a temptation to take the shorter but less reliable path at the expense of many details entering into each calculation to be made.

Second. Authorized by the City charter, and justified by frequent precedents, special messages from time to time may be sent to you from the executive embodying recommendations. Such communications, after matured reflections and a more intimate knowledge of the City's needs, will be of more value than an expression of judgment to-day which might prove subsequently embarrassing when a ripened experience would dictate a course diametrically opposed to one now recommended.

Confronting all city governments and standing belligerent upon the threshold of each contemplated improvement, is the financial problem. With drawn sword it assails our hopes and our efforts to create, to construct, to do something which may bring greater health, peace, security and enjoyment to the City under our care. Cambridge, gentlemen, is not an exception, and you will find the question is not what can the City accomplish this year, but rather what can the City best afford to leave undone. Appealing for funds are schoolhouses, requiring enlarged facilities and improved heating and ventilation; streets needing permanent rebuilding in the place of patching; a new bridge connecting Ward Four with Boston, either by making Magazine Street a main thoroughfare, or another bridge at Brookline Street sufficiently commodious to accommodate the electric cars that they may run by the more direct route to Cottage Farms and over the new tracks to Boston; an extension of our sewer system to care for the surface water in certain sections. Not all, perhaps not any, of these things can be done. Underlying all is the question "What have we to do it with?" This brings us to the subject of

FINANCES.

Last year our tax rate was $16.40. This year the demands upon the treasury for fixed charges will be larger than they were in 1898, and unless an exacting economy be practised our rate must be increased. Indeed it is difficult to see how a higher rate can be avoided. The net funded City debt is $3,232,038.29, a net increase of $323,512.20 during the year which has passed. To meet the interest charges and sinking fund requirements of this increase will require $19,678, to be added in the tax levy. The demands of the Manual Training School which is to become a charge to the City will probably require $20,000. The increase in the salaries of teachers already

employed, decided upon last month by the School Committee, adds another $20,000, and the increased expense of maintenance of new schools and the employment of new teachers will probably require still another $20,000. These four items alone aggregate $80,000, to be added to last year's burdens, and are equivalent to an increase in the rate of eight-ninths of one dollar, or about 90 cents, on the assumption that our valuation will be increased to $90,000,000. This is not only near the danger limit but within ten cents of the legal limit. By Chapter 247 of the Acts of 1893 it is provided that in no city containing less than 100,000 inhabitants shall the amount raised by taxation, exclusive of the State and County Tax and the sums required by law to be raised on account of the City debt, exceed $12 on every $1000 of the assessors' valuation for the preceding year. Last year's current expenses required about an $11 rate. If to this we add the 90 cents above referred to we are within 10 cents of the legal limit. Last year there were no especially large expenditures not equally necessary the coming year. The prudent, sagacious and conscientious administration which has just closed pruned the disbursements wherever a wise economy permitted. Presumably as much as was done last year must be done this year. But confronted by these conditions any aggressive and laudable ambition to foster many commendable projects must be curbed. A high rate repels capital seeking a home and tends to expel that already here.

The limited resources for the performance of the work of our departments become apparent if it be remembered that one-third of our tax rate, of say $16.50, is required to meet fixed charges — that is, interest and sinking fund on City funded loan, and the State and County taxes, and approximately another third is devoted to our School department, leaving only one-third, or about $5.50 on $1,000, for operating the numerous and important departments of the City. This sum is quickly consumed by the usual and ordinary expenditures. Each new project, therefore, must face this question, "Is it of sufficient importance to justify an increased tax rate?" Unless the answer can be in the affirmative the project should be abandoned. If the reasons in its favor leave the matter in doubt, the doubt should be resolved against the project and in favor of the rate. Nor is the relief from this situation to be found in the general conditions, for while about $1,000,000 of our bonded City debt will be paid from the sinking funds during the en-

suing six years, yet any reduction will be at least off-set by new bonds to be issued for improvements already in sight. Gentlemen, this danger signal is exhibited at this time, that the difficulties of the problems of the year may be fully appreciated at the outset. It is cause not for discouragement, but for a resolute purpose that not one dollar of the people's money shall be unnecessarily expended. Our position is as good as that obtaining in many cities, and better than that in some. The entire Metropolitan district is confronted by similar difficulties.

Starting then with the determination to make no unnecessary expenditure, to what can we give an impetus? Of course there are certain usual and necessary things to be done, but upon what particular things should emphasis be laid? Without qualification of prime importance to any city is the status of the

PUBLIC HEALTH.

This department is under the charge of a board possessing statutory powers; to a large extent it is not under your control and yet by granting or withholding appropriations its work may be amplified or curtailed. In 1891 about $4,400, and in 1898 about $17,500, were expended by this department, — a fourfold increase, a justifiable one, however. The importance of its work can hardly be exaggerated as it touches a fundamental purpose of organized society. A comparison of the mortality figures for all the cities in the Commonwealth where the number of deaths exceeded 500 for the year 1897, is a cause for congratulation for our citizens. Our death rate was only 17.64 to the thousand, while the death rate in Boston, Fall River, Lowell, New Bedford, Lawrence, Holyoke, Chelsea and Taunton varied from 19 to 22. Worcester, Springfield, Lynn and Somerville had a lower rate than ours. For twelve months to December 10th, 1898, the number of reported cases of contagious diseases in our City was about one-half the number for a similar period in 1897. Money necessary for the preservation of life and health and the reduction of the death rate will be forthcoming and should have the first claim upon the public purse. Nor is this simply a question of saving life. There is a business side to this problem. It is roughly estimated that the cost to the public of raising and educating a child until fifteen years old is $333; that later the investment with accumulations is returned by the contributions of that child to the public purse through

taxes on its productions. To spend this sum in equipping the child for its period of contribution and then suffering its health or life to be lost when science or money will save it, is squandering an investment just as it reaches a dividend paying basis.

A prolific source of disease is filth. The more cleanly a city, other things being equal, the smaller is the death rate and the better is the health of its inhabitants. By sanitary reform the death rate was reduced in Bradford, England, from 27 to 17, and in Birmingham from 26.8 to 20. New York furnishes a striking example. For ten years, from 1886 to 1895, the average death rate was 25.18. Then began an energetic and intelligent cleaning of the city and its streets which was followed by a death rate of only 20. This simply illustrates the importance of this feature of the work before us. Cambridge streets are not distinctively unclean, but they can be kept cleaner. The amount of flying dust from street accumulations, can be kept at the minimum by frequent and proper sweeping and watering, which is not an expensive way of contributing to the health of a community and incidentally prolonging the life of the street itself.

PARKS.

By the Park Commission a great work has been accomplished and so far as the establishment of parks is concerned, its work is completed. With the exception of Rindge Field, where something should be done to somewhat improve the condition, prudence requires a permanent halt in the expenditure of money for park purposes. But, the work of the Commission is not completed. It seems a misnomer to longer designate it by its present name. It has become a River Front Improvement Commission and as such will furnish the City with a partial solution to the tax rate question which as above stated is not to be found in the general conditions of a city. A great wall adjoining our side of the Charles is becoming a substitute for shelving shores of mud; the exposed flats are disappearing and the intervening marshes are becoming esplanades and desirable house lots. A great and desirable tract of land, with a southern exposure and facing the River, as large as the section of the Back Bay encompassed by Boylston, Beacon, Dartmouth Streets and Massachusetts Avenue, restricted to dwellings costing not less than a sum sufficiently large to assure the good quality of the edifices, will soon attract the investor

and the builder. For 1000 feet on either side of the Harvard Bridge the roadway has been completed. To build an additional 1000 feet on each end will be comparatively inexpensive and easily within the remaining amount of bonds authorized by the Legislature for this purpose, and will open for the market still more land for valuable improvements. That this entire river front is destined to become a beautiful and valuable site seems inevitable. With practically the entire bank owned by the public its commercial features above the West Boston Bridge must disappear, and its residential development follow. The issuance of new bonds upon obtaining authority therefor from the Legislature for the immediate extension of the work already begun is a business question to be decided only after careful consideration. Shall we await the erection of buildings on this beautiful site and the returns in taxes resultant therefrom before pushing on further with the work, or shall we with a courageous faith issue more bonds and extend our work, believing that each added improvement will increase the value and saleability of the sections already completed?

For your careful study and solicitous research is commended the report of the Commissioners.

NEW BRIDGE.

By an act of the Legislature passed last year the construction of a new bridge to be called the Cambridge Bridge was authorized, to take the place of the present West Boston Bridge, the expense to be borne by both Cambridge and Boston, and in part by the Boston Elevated Railway Company. The Mayors of the two cities were named as two of the Commissioners and in accordance with the provisions of the Act they have elected a third Commissioner, Mr. E. D. Leavitt of our City, a most fortunate selection. To this Commission are given unusual powers, and in the exercise of them will be evolved a structure not only commodious but of beauty and adornment and in keeping with the charming environments of which it is destined to be a part when the Charles and its banks have become the most attractive place in New England. That this bridge should be marred by a hideous draw seems as unnecessary as unfortunate, increases the cost of the structure by $300,000 and entails an annual expense of about $3,500 for draw tenders and assistants. Its presence will be a constant source of annoyance, an interruption to public travel and

a hindrance to the rapid transit which the elevated railroad is expected to furnish. Its absence would prevent masted vessels from navigating the river above the bridge, but would not prevent the transportation of coal in barges to the few concerns relying upon this means of transportation. Following the example thus set the bridges up the river, when rebuilt, would be constructed at a sufficient height above the river to allow of the passage of barges, and gradually all draw tenders, and their salaries amounting to $6,500 per year, would be dispensed with, and the day of the dam which is to make the river a lake (and it is certain to come) so much the nearer. The War Department has thus far opposed the closing of the river to general navigation on account of the Watertown Arsenal, but during the late war the shipments from the Arsenal were by rail, not by water. An earnest and well directed effort may secure the requisite assent, and the Legislature, it is believed, would amend the Bridge bill in accordance therewith.

The Trustees of the Sinking Fund of the Water Works are by law the Mayor, the President of the Common Council and the City Treasurer, and there are now in their custody investments exceeding one-third of a million of dollars. The gross bonded water debt is about three and a quarter million of dollars which is to be paid from the Sinking Fund from time to time. The investment of these funds is a matter calling for prudence, sound discretion and the highest attainable knowledge of investment securities, and therefore the gentlemen upon whom is imposed this trust should be selected for their proficiency in these matters. It is not a reflection upon any Mayor or any President of the Common Council to say that they have not usually been selected for these offices on account of their proficiency in this particular matter. Our charter expressly prohibits the appointment of a member of the City Council to be a Commissioner of the Sinking Fund of the City debt, and as the Mayor nominates for this office and presumably would not nominate himself, it is reasonably fair to assume that the spirit of the act disqualifies him from being a member. It would therefore seem advisable to obtain an amendment to our charter providing for the appointment of Trustees of the Sinking Fund of the Water Department in the same manner that now obtains for the appointment of Commissioners of the Sinking Fund for

the City debt; or better still, because tending to minimize the amount of municipal machinery, an amendment transferring the funds to the existing board of Commissioners for the City debt.

By a large majority our citizens voted in favor of pensioning firemen permanently disabled in the discharge of their duty. To frame an ordinance which shall carry into effect this vote, treating with liberality the injured and at the same time conserving the financial interests of the City, is a task requiring care and thought. The value of a severed limb or impaired health is never known until the loss comes and even then cannot be measured by the dollar standard. Recompense cannot be furnished, but substantial aid can and should be rendered to one who in bravely fighting for the City's interests loses the ability to longer earn his livelihood.

An exhortation to you for the faithful performance of duty would be gratuitous, if not presumptuous. Equally uncalled for is any assurance by the executive of the vigorous enforcement of the laws. These features are permanent fixtures in the administration of the affairs of our beloved City. For many, many years, absolute honesty and unswerving faithfulness have characterized our City governments, until our achievements have become an example and our fame an inspiration to sister cities. To do as well as our predecessors is expected; to do even better should be our ideal.

ANNUAL REPORTS

ANNUAL REPORT OF THE CITY AUDITOR

City Auditor's Office,
Cambridge, December 1, 1898.

To the Honorable the City Council :—

The undersigned herewith presents the annual statement of the receipts and expenditures of the City of Cambridge for the fiscal year beginning on the first day of December, 1897, and ending on the thirtieth day of November, 1898, together with a schedule of the City property.

Respectfully submitted,

HARRY T. UPHAM,
City Auditor.

REPORT OF THE CITY AUDITOR

Balance in the Treasury, November 30, 1897			$81,817 76
The receipts from all sources from December 1, 1897, to November 30, 1898, were as follows:—			
From City Departments		$156,115 66	
Water Works		327,505 32	
Taxes:—			
City	$1,496,040 66		
Corporations	74,081 41		
National Banks	16,602 89		
		1,586,724 96	
Sale of Bonds:—			
For Clay Lands	$10,000 00		
Extension and Widening of Streets	15,000 00		
Extension of Water Works	300,000 00		
Filling City Lands	4,900 00		
Parks	150,000 00		
School Houses	292,000 00		
Premiums	23,737 50		
		795,637 50	
Betterments:—			
City	$370 55		
Liens	1,061 55		
Parks	24,280 64		
		25,712 74	
Perpetual Care of Lots in Cambridge Cemetery		3,089 20	
Sale of City Lands		414 25	
Commissioners of Sinking Funds for payment of City Hall Land Loan		83,000 00	
Temporary Loans in anticipation of Taxes		500,000 00	
Trustees of Sinking Fund of Water Works for payment of Water Bonds		12,500 00	
Total receipts			3,490,699 63
The payments have been as follows:—			
For City Departments		$1,885,149 70	
Water Works		634,583 00	
Amounts carried forward		$2,519,732 70	$3,572,517 39

Amounts brought forward		$2,519,732 70	$3,572,517 39
Cemetery Fund (invested)		3,089 20	
Loans :—			
City Hall Land Loan	$83,000 00		
Temporary Loans	500,000 00		
Water Loan	12,500 00		
		595,500 00	
Taxes :—			
Abatements	$27,566 98		
County	79,914 80		
Liens	28,089 58		
Metropolitan Sewer	56,818 94		
National Bank	7,459 91		
State	48,195 00		
		248,045 21	
Total expenditures			3,366,367 11
Balance unexpended			$206,150 28

This amount was raised by loans and is subject to draft for amounts contracted for but not ready for payment, as follows :—

Clay Lands	$1,273 70	
Extension and Widening of Streets	16,044 53	
Extension of Water Works	21,457 99	
Filling City Lands	1,407 25	
Parks	27,583 18	
School Houses	131,263 66	
Premiums	6,848 29	
		205,878 60
Leaving a net balance of		$271 68

CITY FUNDED DEBT.

There has been an addition to the City Funded Debt during the year as follows :—

City Loan, registered bonds payable in ten years, at an annual interest of three and one-half per cent.	
For the purpose of defraying the expense of filling certain parcels of City land near Charles River, and situated between Main Street, West Boston Bridge and Harvard Bridge	$4,900 00
Clay Land Loan, registered bonds payable in fifteen years, at an annual interest of three and one-half per cent.	
For the purpose of defraying the expense incident to the restricting of the land of the Bay State Brick Company, as per agreement of said Company with the City of Cambridge, dated April 16, 1896, in the laying out, accepting	
Amount carried forward	$4,900 00

Amount brought forward	$4,900 00
and establishing of certain streets, and the building, construction and establishment of main drains or common sewers, within the tract of land so to be restricted and in accordance with the authority conferred by Chapter 175 of the Legislative Acts of the year 1896	10,000 00
Park Loans, registered bonds payable in forty years, at an annual interest of three and one-half per cent.	
For the purpose of paying for land taken for our system of public parks and for the construction, adornment, renewal and enlargement of said parks under authority conferred by Chapter 89 of the Legislative Acts of the year 1894	100,000 00
Also for the purpose of the extension of the Esplanade in accordance with the provisions of Chapter 469 of the Legislative Acts of the year 1897	50,000 00
School House Loans, registered bonds payable in twenty years, with interest at three and one-half per cent. per annum.	
For the purpose of defraying the cost of construction of the new Latin School House on Trowbridge Street . .	141,000 00
Also registered bonds, payable in twenty years, for the purpose of defraying the cost of purchasing the sites and erecting sundry school houses, viz.:	
New School House in Ward Two (Roberts) . . .	61,000 00
New School House in Ward Five (Ellis) . . .	50,000 00
Addition to Peabody School House	40,000 00
Street Loan, registered bonds payable in twenty years, at an annual interest of three and one-half per cent.	
For the purpose of defraying the cost of widening, extension and laying out of sundry streets	15,000 00
	$471,900 00
There has been a decrease in the City Debt by the payment of matured bonds as follows:—	
Land Loan, coupon bonds issued August 1, 1888, at an annual interest of four per cent.	83,000 00
Total	$388,900 00

	1897.	1898.	Increase.
Funded City Debt	$3,623,500 00	$4,012,400 00	$388,900 00
Sinking Funds	714,973 91	780,361 71	65,387 80
Net Funded City Debt	$2,908,526 09	$3,232 038 29	$323,512 20

The following is a statement of the total funded debt of the city, with the rates of interest thereon: —

BRIDGE LOAN.

Date of Issue.	Rate of Interest.	When due.	Amount.	Total.
Oct. 1, 1887.....	4 per cent.—30 yrs.....	Oct. 1, 1917.....	$10,000 00	
July 1, 1888.....	4 " —30 "	July 1, 1918.....	100,000 00	
Sept. 1, 1888.....	4 " —30 "	Sept. 1, 1918.....	100,000 00	
Mar. 1, 1889.....	4 " —30 "	Mar. 1, 1919.....	115,900 00	
Nov. 1, 1890.....	4 " —30 "	Nov. 1, 1920.....	5,000 00	
July 1, 1891.....	4 " —30 "	July 1, 1921.....	60,000 00	
July 1, 1891.....	4 " —10 "	July 1, 1901.....	15,000 00	
Aug. 1, 1893.....	4 " —30 "	Aug. 1, 1923.....	10,000 00	$415,000 00

BUILDING LOAN.

May 2, 1892.....	4 per cent.—10 yrs.....	May 2, 1902.....	$20,000 00	
Nov. 1, 1893.....	4 " —10 "	Nov. 1, 1903.....	40,000 00	
Aug. 1, 1894.....	4 " —20 "	Aug. 1, 1914.....	118,000 00	
Oct. 1, 1895.....	4 " —20 "	Oct. 1, 1915.....	60,000 00	
Oct. 1, 1896.....	4 " —20 " .. .	Oct. 1, 1916.....	103,000 00	$341,000 00

CAMBRIDGE CEMETERY LOAN.

Aug. 1, 1895.....	4 per cent.—20 yrs.....	Aug. 1, 1905.....		$65,000 00

CITY LOAN.

Aug. 1, 1894.....	4 per cent.—10 yrs..	Aug. 1, 1904.....	$52,000 00	
Aug. 1, 1898.....	3½ " —10 " ..	Aug. 1, 1908.....	4,900 00	$56,900 00

CLAY LAND LOAN.

July 1, 1896.....	4 per cent.—15 yrs..	July 1, 1911.....	$50,000 00	
Nov. 1, 1897.....	3½ " —15 " ..	Nov. 1, 1912.....	20,000 00	
Aug. 1, 1898... ..	3½ " —15 " ..	Aug. 1, 1913.....	10,000 00	$80,000 00

PARK LOAN.

Feb. 1, 1894.....	4 per cent.—30 yrs.....	Feb. 1, 1924.....	$360,000 00	
Aug. 1, 1895.....	4 " —40 "	Aug. 1, 1935.....	100,000 00	
Feb. 1, 1896.....	4 " —40 "	Feb. 1, 1936.....	100,000 00	
Aug. 1, 1896.....	4 " —30 "	Aug. 1, 1926.....	100,000 00	
Oct. 1, 1896.....	4 " —30 "	Oct. 1, 1926.....	40,000 00	
Sept. 1, 1897.....	3½ " —40 "	Sept. 1, 1937.....	100,000 00	
Nov. 1, 1897.....	3½ " —40 "	Nov. 1, 1937.....	50,000 00	
June 1, 1898.....	3½ " —40 "	June 1, 1938.....	50,000 00	
Aug. 1, 1898.....	3½ " —40 "	Aug. 1, 1938.....	100,000 00	$1,000,000 00

PAVING LOAN.

Nov. 1, 1892.....	4 per cent.—10 yrs.....	Nov. 1, 1902.....	$50,000 00	
Oct. 1, 1897.....	3½ " —10 "	Oct. 1, 1907.....	20,000 00	$70,000 00

SCHOOL-HOUSE LOAN.

May 1, 1890.....	4 per cent.—10 yrs.....	May 1, 1900.....	$100,000 00	
Jan. 1, 1891.....	4 " —10 "	Jan. 1, 1901....	100,000 00	
July 1, 1891.....	4 " —10 "	July 1, 1901.....	60,000 00	
Nov. 1, 1892.....	4 " —10 "	Nov. 1, 1902.....	20,000 00	
Oct. 1, 1896.....	4 " —20 "	Oct. 1, 1916.....	6,000 00	
July 1, 1897.....	3½ " —20 "	July 1, 1917.....	100,000 00	
Nov. 1, 1897.....	3½ " —10 "	Nov. 1, 1907.....	9,500 00	
May 2, 1898.....	3½ " —20 "	May 2, 1918.....	100,000 00	
June 1, 1898.....	3½ " —20 "	June 1, 1918.....	50,000 00	
Aug. 1, 1898.....	3½ " —20 " ...	Aug. 1, 1918.....	142,000 00	$687,500 00

Amount carried forward $2,715,400 00

Amount brought forward $2,715,400 00

SEWER LOAN.

Date of Issue.	Rate of Interest.	When due.	Amount.	Total.
July 1, 1873.....	6 per cent.—30 yrs.....	July 1, 1903.....	$136,000 00	
July 1, 1874.....	6 " —30 "	July 1, 1904.....	295,000 00	
July 1, 1875.....	6 " —30 "	July 1, 1905.....	144,000 00	
Nov. 1, 1887.....	4 " —20 "	Nov. 1, 1907.....	30,000 00	
Nov. 1, 1889.....	4 " —20 "	Nov. 1, 1909.....	22,000 00	
May 1, 1890.....	4 " —20 "	May 1, 1910.....	15,000 00	
July 1, 1891.....	4 " —20 "	July 1, 1911.....	15,000 00	
Aug. 1, 1894.....	4 " —30 "	Aug. 1, 1924.....	75,000 00	
Oct. 1, 1895.....	4 " —30 "	Oct. 1, 1925.....	60,000 00	
Oct. 1, 1896.....	4 " —20 "	Oct. 1, 1916.....	75,000 00	$867,000 00

STREET LOAN.

May 2, 1892.....	4 per cent.—10 yrs.....	May 2, 1902.....	$55.000 00	
Aug. 1, 1894.....	4 " —20 "	Aug. 1, 1914.....	30,000 00	
Oct. 1, 1895.....	4 " —20 "	Oct. 1, 1915.....	60,000 00	
Oct. 1, 1896.....	4 " —20 "	Oct. 1, 1916. ...	137,000 00	
Nov. 1, 1897.....	3½ " —10 "	Nov. 1, 1907.....	11,000 00	
May 2, 1898.....	3½ " —20 "	May 2, 1918.....	15,000 00	$308,000 00

STREET WIDENING LOAN.

Nov. 1, 1889.....	4 per cent.—10 yrs.....	Nov. 1, 1899.....	$8.000 00	
July 1, 1873.....	6 " —30 "	July 1, 1903....	10,000 00	
July 1, 1874.....	6 " —30 "	July 1, 1904.....	90,000 00	
July 1, 1875.....	6 " —30 "	July 1, 1905.....	14,000 00	$122.000 00

TOTAL FUNDED CITY DEBT $4,012,400 00

THE FUNDED WATER DEBT.

There has been a decrease in the Funded Water Debt during the year by the payment of the following matured loans:—

Water Loan, issued July 1, 1878, and payable July 1, 1898, with interest at 5 per cent. $12,500 00

There has been an addition to the Water Debt during the year by the issue of registered 3 1-2 per cent. bonds as follows:—

Dec. 1, 1897, due Dec. 1, 1917	$140,000 00
May 2, 1898, due May 2, 1918	50,000 00
June 1, 1898, due June 1, 1918	60,000 00
Nov. 1, 1898, due Nov. 1, 1918	50,000 00
	$300,000 00

	1897.	1898.	Increase.
Funded Water Debt.....	$2,961,600 00	$3,249,100 00	$287,500 00
Sinking Fund of Water Works...	464,138 28	545,396 78	81,258 50
Net Funded Water Debt..	$2,497,461 72	$2,703,703 22	206,241 50

Following is a statement of the total Funded Water Debt of the city, with rates of interest thereon: ——

Date of Issue.	Rate of Interest.	When Due.	Amount.	Total.
Nov. 1, 1886.....	3½ per cent.—20 yrs..	Nov. 1, 1906.....	$43,000 00	
Oct. 1, 1887.....	4 " —20 " ..	Oct. 1, 1907.....	90,000 00	
Nov. 1, 1887.....	4 " —20 " ..	Nov. 1, 1907.....	22,000 00	
July 1, 1888.....	4 " —20 " ..	July 1, 1908.....	46,000 00	
Aug. 1, 1888.....	" —20 " ..	Aug. 1, 1908.....	25,000 00	
July 1, 1889.....	4 " —20 " ..	July 1, 1909.....	20,000 00	
May 1, 1885.....	4 " —25 " ..	May 1, 1910.....	288,000 00	
July 1, 1890.....	1 " —20 " ..	July 1, 1910.....	75,000 00	
Sept. 1, 1890.....	4 " —20 " ..	Sept. 1, 1910.....	125,000 00	
Jan. 1, 1891.....	4 " —20 " ..	Jan. 1, 1911.....	20,000 00	
Oct. 1, 1891.....	4 " —20 " ..	Oct. 1, 1911.....	35,000 00	
Jan. 1, 1892.....	4 " —20 " ..	Jan. 1, 1912.. ..	150,000 00	
May 2, 1892.....	4 " —20 " ..	May 2, 1912.....	75,000 00	
Nov. 1, 1892	4 " —20 " ..	Nov. 1, 1912.....	45,000 00	
Feb. 1, 1893.....	4 " —20 " ..	Feb. 1, 1913.....	100,000 00	
Aug. 1, 1893.....	4 " —20 " ..	Aug. 1, 1913.....	50,000 00	
April 1, 1895.....	4 " —20 " ..	April 1, 1915.....	200,000 00	
Aug. 1, 1895.....	4 " —20 " ..	Aug. 1, 1915.....	200,000 00	
April 1, 1894.....	4 " —30 " ..	April 1, 1924.....	300,000 00	
April 1, 1896.....	4 " —20 " ..	April 1, 1916.....	100,000 00	
July 1, 1896.....	4 " —20 " ..	July 1, 1916.....	200,000 00	
Aug. 1, 1896.....	4 " —20 " ..	Aug. 1, 1916.....	100,000 00	
Oct. 1, 1896.....	4 " —20 " ..	Oct. 1, 1916.....	265,100 00	
April 1, 1897.....	3½ " —20 " ..	April 1, 1917.....	200,000 00	
July 1, 1897.....	3½ " —20 " ..	July 1, 1917.....	100,000 00	
Nov. 1, 1897.....	3½ " —20 " ..	Nov. 1, 1917.....	75,000 00	
Dec. 1, 1897.....	3½ " —20 " ..	Dec. 1, 1917.....	140,000 00	
May 2, 1898.....	3½ " —20 " ..	May 2, 1918.....	50,000 00	
June 1, 1898.....	3½ " —20 " ..	June 1, 1918.....	60,000 00	
Nov. 1, 1898.....	3½ " —20 " ..	Nov. 1, 1918.....	50,000 90	$3,249,100 00

Recapitulation.

Amount of funded City Loan upon which interest is at 6 per cent.	$689,000 00	
Amount of funded City Loan upon which interest is at 4 per cent.	2,541,000 00	
Amount of funded City Loan upon which interest is at 3 1-2 per cent.	782,400 00	
		$4,012,400 00
Amount of Water Loan upon which interest is at 4 per cent.	2,531,100 00	
Amount of Water Loan upon which interest is at 3 1-2 per cent.	718,000 00	
		$3,249,100 00

Temporary loans for the past twelve years, and interest paid upon the same:—

Year.	Temporary Loan.	Interest paid upon Loan.	Year.	Temporary Loan.	Interest paid upon Loan.
1887.....	$555,000	$9,222 24	1893.....	$541,850	$11.560 32
1888.....	400,000	9,497 36	1894.....	125.000	3,106 15
1889.....	490,000	5,919 54	1895.....	550,000	6,194 64
1890.....	425,000	7,570 57	1896.....	786,000	12,344 07
1891.....	465.000	10,796 25	1897.....	600,000	6,186 40
1892.....	516,000	8,015 51	1898.....	500,000	9,642 86

The Trust Funds

Assumed by the city are held by trustees, and interest is paid upon them at the rate of six per cent. annually, as follows:—

Name of Fund.	Amount.	Interest.
Daniel White Charity Fund	$5,000	At 6 per cent. $300
Dowse Institute Fund	10,000	At 6 per cent. 600
Sanders Temperance Fund	10,000	At 6 per cent. 600
	$25,000	$1,500

Cemetery Fund.

Amount of Fund Nov. 30, 1897		$40,184 58
RECEIVED.		
For perpetual care of lots in Cambridge Cemetery	$3,089 20	
Interest on investments	1,510 84	
	$4,600 04	
EXPENDED.		
For care of lots in Cambridge Cemetery	$1,510 84	
		3,089 20
Amount of Fund, Nov. 30, 1898		$43,273 78
The Fund is held in trust and is invested as follows:—		
City of Cambridge Bonds	$41,400 00	
Cambridgeport Savings Bank	1,873 78	
		$43,273 78

Commissioners of Sinking Fund.

Amounts of Funds, Nov. 30, 1897		$714,973 91
RECEIVED.		
From City Treasurer, being amount appropriated by the City Council to be derived from taxation	$125,947 50	
Interest accumulations	22,440 30	
		$148,387 80
		$863,361 71
EXPENDED.		
For matured Bonds		83,000 00
Amount of Fund, Nov. 30, 1898		$780,361 71

Trustees of Sinking Fund of Water Works.

Amount of Fund, Nov. 30, 1897		$464,138 28
From City Treasurer, for amount due and appropriated by the City Council from the Revenue of the Water Works	$103,656 00	
Interest accumulations	10,153 53	
		113,809 53
Amount carried forward		$577,947 81

EXPENDED.

Amount brought forward		$577,947 81
For matured Water Bonds	$12,500 00	
Interest and premium on investments . . .	20,051 03	
		32,551 03
Amount of Fund, Nov. 30, 1898		$545,396 78

Abatement — Taxes.

No appropriation is made for abatements, as the Assessors are expected to allow in the overlay an amount sufficient to cover the same.

The overlay for 1898 was	$31,744 53
The total amount of tax abatements allowed was . . .	27,566 98
Balance available for city purposes	$4,177 55

The abatements allowed by the City Collector on certificates of the Assessors were as follows: —

	Real.	Personal.	Polls.	Total.
Tax of 1892.....		$3 20		$3 20
" 1893.....		3 28	$2 00	5 28
" 1894.....		4 74	.....	4 74
" 1895.....		59 66	10 00	69 66
" 1896.....	$122 84	760 63	18 00	901 47
" 1897.....	3,124 43	2,668 69	34 00	5,827 12
" 1898.....	10,445 57	10,055 27	162 00	20,662 84
Street Watering.....	.....	.....	.....	92 67
	$13,692 84	$13,555 47	$226 00	$27,566 98

TAXES.

The amount of taxes assessed by the Board of Assessors on the real and personal estates and polls of Cambridge, for the year 1898, was as follows: —

Valuation of real estate		$72,908,100 00
Valuation of personal estate		16,642,990 00
		$89,551,090 00
Assessed at $16.40 per $1,000 gives		$1,468,637 88
24,628 polls at $2		49,256 00
Bank stock (non-residents separately assessed) . . .		6,902 92
		$1,524,796 80
This tax is divided as follows: —		
For city purposes*		$1,301,220 61
County assessments		79,914 80
Overlay		31,744 53
State assessments		105,013 94
State charge for non-resident bank stock . . .		6,902 92
		$1,524,796 80

* To meet the city expenses the income from various departments is added to this sum raised by taxation.

Increase in number of polls since last year: —	
221 polls at $2.00	$442 00
Increase in real estate valuation	2,568,900 00
Increase in personal valuation	340,445 00
Gain in valuation since last year	$2,909,787 00
Number of houses in 1898	13,473½
Number of houses in 1897	13,217
Number of houses built during the past year	256½
Number of horses assessed	4,981
Number of cows assessed	261
Number of swine asssessed	58

POLLS AND VALUATION OF POLLS AND ESTATES, MAY 1, 1896.

Wards.	Polls.	Valuation of Polls.	Personal.	Real Estate.	Total Real and Personal	Dwellings.	Total Tax.
One.....	3,964	$7,928 00	$5,973,100	$18,095.700	$24.068.800	2,483	$371,366 88
Two.....	7,170	14,340 00	3,642,760	15,335,400	18,978,160	3,340	300.910 21
Three.....	3,693	7,386 00	1,919,935	9,311,100	11,231,035	1,636	176 974 63
Four.....	5,880	11,760 00	2,494.800	14,823.200	17.318,000	3,158	273,261 80
Five.....	3,140	6.280 00	1,884,400	10,269,700	12,154.100	2,106	189,806 91
Totals...	23,847	$47,694 00	$15,914,995	$67.835,100	$83,750,085	12,723	$1.312,320 43

POLLS AND VALUATION OF POLLS AND ESTATES, MAY 1, 1897.

Wards.	Polls.	Valuation of Polls.	Personal.	Real Estate.	Total Real and Personal	Dwellings.	Total Tax.
One.....	4,119	$8,238 00	$6,640,380	$19,498.700	$26,139,080	2,599	$465,671 90
Two.....	7,244	14.488 00	3,394,345	15,849,000	19,243,345	3,477	351,246 53
Three.....	3,742	7.484 00	1,953.520	9,389,700	11,343,220	1,604	205,990 35
Four.....	5,894	11,788 00	2,458,700	14.585,200	17,043.900	3,280	310,056 25
Five.....	3,408	6,816 00	1,855.600	11,016,600	12,872,200	2,257	232,079 50
Totals...	24,407	$48,814 00	$16,302,545	$70,339,200	$86,641.745	13,217	$1,565,044 53

POLLS AND VALUATION OF POLLS AND ESTATES, MAY 1, 1898.

Wards.	Polls.	Valuation of Polls.	Personal.	Real Estate.	Total Real and Personal	Dwellings.	Total Tax.
One.....	4,145	$8,290 00	$6,546.050	$20.459,700	$27.005,750	2,632	$451,184 30
Two.....	7,307	14,614 00	3,525,795	16.259,200	19.784,995	3,572½	339,087 918
Three.....	3,751	7,502 00	2,027,245	9,693,500	11,720,745	1,609	199,722 218
Four.....	5,937	11,874 00	2,547,100	14,854,700	17,401,800	3,333	297,263 52
Five.....	3,488	6,976 00	1,996,800	11,641,000	13,637,800	2,327	230,635 92
Totals...	24,618	$49,256 00	$16,642,990	$72,908,100	$89,551,090	13,473½	$1,517,893 876

Statement of the valuations of the personal property and real estate of the City of Cambridge, with the number of polls, dwellings, and rate of taxation for the past ten years: —

Year.	Polls.	Personal.	Real Estate.	Total.	Dwellings.	Rate per $1.000.
1889.....	18,307½	14,960,100	50,324.175	65.284.275	10.222	$16 00
1890.....	19,221¾	15,339.925	52.235,000	67.574,925	10.615	15 60
1891.....	20,731¼	16,508,770	54,167,914	70.676.684	10,932	15 50
1892.....	22,013¼	17,687,595	56,668,100	74,355,695	11,359	15 00
1893.....	22,752	17,511,089	58,782,900	76,293,989	11,768	16 40
1894.....	22,172	16,658 320	60,877,300	77,535,620	12,262	15 80
1895.....	22,781	16,607.360	64,303,700	80,911,060	12,305	15 70
1896.....	23,847	15,914,995	67.835,100	83,750,095	12,723	15 10
1897.....	24,407	16,302,545	70,339,200	86,641,745	13,217	17 50
1898.....	24,628	16,642,990	72,908,100	89,551,090	13,473	16 40

Abatements and discounts upon taxes for the past ten years, and amount of tax uncollected December 1, 1898 :—

Year.	Total Tax.	Total Abatement.	Total Discounts.	Amount of Tax uncollected Dec. 1, 1898.
1889.....	$1,088,374 60	$20,982 71	$28,081 09	
1890.....	1,099,741 38	20,966 82	28,012 44	
1891.....	1,143.712 67	21,343 12	.....	
1892.....	1,240,186 50	21,636 54	.....	
1893.....	1,303,639 84	24,678 10	.....	$17,132 24
1894.....	1,278,899 72	26,926 07	.....	15,730 28
1895.....	1,324.613 76	19,427 40	.....	21,439 97
1896.....	1,321,932 65	17,922 54	.....	28,623 76
1897.....	1,574,047 50	22,081 73	.....	37,286 12
1898.....	1,527,863 88	27,566 98	.....	258,267 02

The valuations of estates in this city, for the years hereinbefore mentioned, are the same as originally made by the Board of Assessors, during those years, and the same figures were reported by that board to the Tax Commissioners for each of the years respectively. These valuations were subject to changes in each year, after such report was made, as shown by the following :—

Net valuations of estates in the City of Cambridge, for the past three years, after adding the amounts of all supplementary warrants and deducting therefrom all abatements :—

Year.	Total Valuation.	Abatements.	Net Valuation.
1896.....	$84,026,530	$1,250,814	$82,775,716
1897.....	86,773.545	1,304,350	85,469,195
1898.....	89,700,790	1,250,050	88,450,740
	$260,500,865	$3,805,214	$256,695,651

Borrowing Capacity.

The average net valuation of the City of Cambridge for the years 1896, 1897 and 1898, is . $85,565,217

This last sum represents the amount upon which the limit of the rate of taxation, and also of municipal indebtedness is fixed under the provisions of Chapter 312 of the Acts of the year 1885.

2½ per cent. on the same is $2,139,130 42

The entire City Debt is $4,012,400 00

Of this amount the following loans are not within the legal debt limit, being exempted by the following Acts of the Legislature :—

Harvard Bridge Loan.

Acts of 1887, Chapter 282
Acts of 1888, Chapter 73
Acts of 1891, Chapter 311 } $400,000 00

Park Loan.

Acts of 1892, Chapter 341
Acts of 1893, Chapter 337
Acts of 1894, Chapter 89
Acts of 1897, Chapter 469 } 1,000,000 00

Amounts carried forward . . $1,400,000 00 $4,012,400 00 $2,139,130 42

Amounts brought forward . .	$1,400,000 00	$4,012,400 00	$2,139,130 42
Clay Land Loan.			
Acts of 1896, Chapter 175 . .	80,000 00		
		1,480,000 00	
		$2,532,400 00	
The entire Sinking Fund is . .	$780,361 71		
Of this amount there should be deducted on account of Exempted Loans :—			
" Harvard Bridge " $89,563 87			
" Park " . . 44,354 52			
Clay Lands . . 6,087 50			
	140,005 89		
Net Sinking Fund		640,355 82	
Net City Debt Dec. 1, 1898			1,892,044 18
Borrowing capacity for City purposes, Dec. 1, 1898			247,086 24
Borrowing capacity for " Clay Lands " . .			50,000 00
Borrowing capacity for " Parks " . . .			100,000 00

"ACTS OF 1885, CHAPTER 312.

"AN ACT TO LIMIT MUNICIPAL DEBT OF AND THE RATE OF TAXATION IN CITIES.

"Be it enacted, etc., as follows : —

"SECTION 1. The taxes assessed on property in any city, except the City of Boston, exclusive of State Tax, County Tax and sums required by law to be raised on account of the City Debt, shall not exceed in any year twelve dollars on every one thousand dollars of the average of the assessors' valuations of the taxable property therein for the preceding three years, the valuation being first reduced by the amount of all abatements allowed thereon, previous to the thirty-first day of December in the year preceding said assessment, and any order or appropriation requiring a larger assessment than is herein limited shall be void.

"SECTION 2. The limit of indebtedness of cities shall hereafter be two and one-half per cent. on the average valuation prescribed in Section one of this act."

TAX LEVY

Average net valuation for 1896, 1897 and 1898	$35,565,217 00
Assessed at $12.00 per $1,000 gives	1,026,782 60

Which is the legal limit of taxation for municipal purposes for 1898, outside of the Sinking Fund requirements, Interest on the Debt and State and County Tax, unless advantage is taken of the following Legislative Act of 1893 : —

ACTS OF 1893, CHAPTER 247.

"AN ACT AUTHORIZING ASSESSORS IN CITIES OF LESS THAN ONE HUNDRED THOUSAND INHABITANTS TO USE THE VALUATION OF THE YEAR PRECEDING AS A BASIS OF TAXATION.

"Be it enacted, etc., as follows : —

"SECTION 1. In every city containing less than one hundred thousand inhabitants, the taxes assessed on property, exclusive of State Tax, County Tax and sums required by law to be raised on account of City Debt, shall not exceed in any year twelve dollars on every one thousand dollars of the assessors' valuation of the taxable property therein for the preceding year, said

valuation being first reduced by the amount of all abatements allowed thereon previous to the thirty-first day of December in the year preceding said assessment, and any order or appropriation requiring a larger assessment than is herein limited shall be void; but, the City Council of any city coming within the provisions of this Act, may, in any year, decide that the taxes assessed shall be raised in accordance with the provisions of Section one of Chapter three hundred and twelve, of the Acts of the year eighteen hundred and eighty-five."

In which case the net valuation for 1898 being $88,450,470 00
Assessed at $12.00 per $1,000 gives $1,061,408 88

Balance Sheet of the City of Cambridge, December 1, 1898, Showing Assets and Liabilities.

	Assets.	Liabilities.
Betterments	$4,396 35	
Cemetery Fund	43,273 78	
City Debt (Contingent)	.....	$200,000 00
City of Cambridge (City Property)	5,408,235 67	.....
City Treasurer (Cash)	206,150 28	.....
Daniel White Charity (Trust Fund)	.....	5,000 00
Dowse Institute Fund (Trust Fund)	.....	10,000 00
Funded City Debt	.....	4,012,400 00
Funded Water Debt	.....	3,249,100 00
Park Betterments	73,094 23	.....
Park Betterments Lien	23,426 53	.....
Sanders Temperance Fund (Trust Fund)	.....	10,000 00
Sinking Funds	780,361 71	.....
Sinking Fund of Water Works	545,396 78	.....
Taxes due the City	378,479 39	.....
Tax Liens	24,176 35	.....
Tax Sale "Surplus"	.....	491 07
	$7,486,991 07	$7,486,991 07

Estimated Revenue and Actual Revenue for the Year Ending November 30, 1898.

	Actual.	Estimated.
Bridge Department	$746 18	$700 00
Cemetery Department	19,086 37	20,000 00
City Clerk Department	2,640 90	2,550 00
Contingent Fund	1,678 85	1,500 00
Engineering Department	1,000 00	1,000 00
Fire Department	108 75	125 00
Health Department	180 00	.....
Inspection of Milk and Vinegar	170 00	150 00
Inspection of Wires	279 14	200 00
Interest	12,073 30	8,000 00
Lamp Department	30 23	.....
Law Department	1,558 30	1,500 00
Overseers of the Poor	23,073 43	19,650 00
Park Department	2,341 48	2,000 00
Plumbers' Examiners	35 00	70 00
Police Department	6,082 76	7,000 00
Public Library	4,864 68	4,650 00
Public Property	5,694 13	5,600 00
School Department	2,719 49	2,300 00
Sealer of Weights and Measures	502 09	500 00
Sewer Department	11,085 37	20,150 00
State Aid	14,644 09	14,000 00
Stationery and Printing	1,177 53	1,200 00
Street Department	42,032 50	35,500 00
Treasury Department	2,311 09	2,500 00
Water Works	327,505 32	324,500 00
Taxes:		
Corporation	74,081 41	75,000 00
National Bank (net)	9,142 98	5,000 00
Taxes 1898	1,269,596 86	1,327,863 88
Old Taxes	226,443 80	200,000 00
	$2,062,886 03	$2,083,208 88

After the annual appropriations had been made, the following additional appropriations were made to be provided for by a City Debt, viz.: —

For Cambridge Bridge	$50,000 00
Filling City Lands	4,900 00
Parks, "Charles River Esplanade"	40,000 00
New School House, Ward Two	2,000 00
Addition to Peabody School House	2,000 00
Fresh Pond Land	53,000 00
	$151,900 00

Of this amount bonds to the amount of $94,900.00 were issued.

After the annual appropriations had been made the following appropriations were made and provided for by transfers and revenue, viz.: —

Assessors' Department		$552 25
Bridge Department		1,600 00
City Clerk's Department		1 10
City Messenger's Department		60 00
Election expenses: —		
City Clerk	$12 37	
Supt. of Buildings	600 00	
		612 37
Inspection of Wires		1,200 00
Overseers of the Poor: —		
Farm and Ledge	$1,200 00	
Outside Aid	2,850 00	
		4,050 00
Park Department, Interest		960 00
School Department: —		
Care of Truants	$425 00	
Salaries	1,050 00	
		1,475 00
State Aid		1,300 00
Stationery and Printing		13 14
Street Department: —		
Clay Lands	$4,000 00	
Cleaning	2,500 00	
Collection of Ashes	1,200 00	
Maintenance	300 00	
Paving	1,265 00	
		9,265 00
Water Works: —		
Fresh Pond Reservoir	$8,000 00	
Rates, Fines, etc., Abatement	400 00	
Rates, Fines, etc., Refunds	200 00	
Interest	500 00	
		9,100 00
		$30,188 86

Transfers.

The following transfers were made from the appropriations mentioned, to make up deficiencies occurring in the appropriations to which transfers were made, viz. :—

From the Appropriation for	Amounts.	To the Appropriation for	Amounts.
Bridge Department	$700 00	Contingent Fund	$700 00
City Clerk Department: —		Contingent Fund	3,000 00
Printing Town Records	1, 00 00		
Revision of Ordinances	2,000 00		
Contingent Fund	6,198 47	Assessors' Department	500 00
		City Clerk Department	1 10
		Election Expenses	12 37
		Inspection of Wires	400 00
		Overseers of the Poor, Outside Aid	2,850 00
		Park Department, Interest	960 00
		School Dept., Care of Truants	425 00
		School Department, Salaries	1,050 00
Engineering, Assessors' Plans	52 25	Assessors' Department	52 25
Fire Department	800 00	Contingent Fund	1,800 00
Interest	1,000 00		
Lamp Department	800 00	Inspection of Wires	800 00
Public Property, Shooting Range.	600 00	Election Expenses	600 00
Sewer Department, Clay Lands	4,000 00	Street Department, Clay Lands	4,000 00
Soldiers' Relief	1,300 00	State Aid	1,300 00
Stationery and Printing	60 00	City Messenger Department	60 00
Street Department, Bridges	1,800 00	Bridge Department	1,600 00
		Street Department, Coll. of Ashes	200 00
Street Dept., Construction	3,500 00	Street Department, Cleaning	2,500 00
		Collection of Ashes	1,000 00
Street Department, Watering	1,000 00	Street Department, Paving	1,000 00
Water Works Construction: —		Water Works, Construction: —	
Hobbs Brook Reservoir	8,000 00	Fresh Pond Reservoir	8,000 00
Water Works, Maintenance: —		Water Works, Maintenance: —	
Renewal of Mains	1,100 00	Interest	500 00
		Abatements	400 00
		Refunds	200 00
	$33,910 72		$33,910 72

Comparative Statement by Decades from 1855 to 1895.

	1855.	1865.	1875.	1885.	1895.
Population	20,637	29,112	47,838	59,660	81,643
Valuation	$15,437,100 00	$26,085,900 00	$66,623,014 00	$55,346,555 00	$80,911,060 00
City Tax	100,604 53	267,708 60	1,060,396 52	804,800 00	1,103,455 30
County Tax	10,137 78	18 280 99	37,580 73	29,381 54	73,887 84
State Tax	5,190 00	118,487 00	58,880 00	44,835 00	46,800 00
Tax rate per $1,000	7 10	15 00	17 00	15 50	15 70
Total Expenditures	173,533 58	536,911 82	2,605,267 74	2,354,298 69	3,686,702 54
City Debt	146,600 00	833,092 00	4,106,843 21	2,361,396 50	3,913,634 23
Expenditures by Departments: —					
Bridges	890 31	9,007 77	39,068 39	11,829 77	16,297 33
Cemeteries	6,553 67	16,742 29	19,438 66	80,399 22	16,999 40
Fire Department	9,623 70	21,958 74	89,949 99	59,341 15	104,898 59
Lighting Streets	2,987 32	9,062 24	20,919 04	32,269 07	69,926 61
Pauper Department	8,520 41	21,481 52	79,719 54	56,338 24	100,841 33
Police Department	4,499 56	22,833 14	71,093 35	78,357 73	110,784 22
Public Library		1,111 77	6,040 04	6,643 51	21,034 83
Schools	32,169 16	81,842 47	258,985 15	227,511 77	362,353 79
Sewers	4,610 68	3,683 07	135,432 28	40,945 40	149,459 89
Streets	14,554 73	35,638 38	155,476 90	148,088 65	252,154 62
Water Works		20,327 79	234,431 03	485,691 04	758,054 81

Expenditures of the Different Departments from 1891 to 1898 inclusive.

Names of Departments.	Expended in 1891.	Expended in 1892.	Expended in 1893.	Expended in 1894.	Expended in 1895.	Expended in 1896.	Expended in 1897.	Expended in 1898.
Ambulance Department	.....	.....	.....	$625 00	$2,269 15	$2,452 39	.....	.....
Assessors' Department	$9,585 82	$10,665 86	$10,922 58	10,919 65	12,797 40	12,943 24	$13,077 44	$13,552 25
Auditing Department	3,118 43	3,167 32	3,445 86	3,983 67	3,352 03	3,567 88	3,511 12	3,489 04
Cemetery Department	18,131 22	16,791 09	19,462 59	17,998 89	16,999 40	20,000 00	19,846 77	19,832 66
City Clerk Department	5,656 66	5,996 68	5,978 12	6,229 55	6,404 25	7,107 04	7,193 53	7,759 82
City Messenger Department	2,533 83	2,518 16	2,525 96	2,587 54	2,645 92	2,763 59	2,799 51	2,859 04
Civil Service Department	224 80	225 00	240 50	224 50	275 00	249 97	248 07	248 85
Clerk of Committees Department	3,428 36	3,451 52	3,526 06	3,597 37	3,708 47	3,925 34	3,946 56	3,972 39
Contingent Fund	8,075 97	7,212 36	10,847 07	15,348 28	14,514 68	16,139 18	7,966 46	11,064 33
Election Expenses	7,385 56	10,557 49	12,044 88	9,692 50	9,476 60	12,463 99	9,943 08	10,861 47
Engineering Department	9,448 59	9,902 11	9,644 00	15,279 50	22,743 52	14,211 55	12,969 29	11,147 34
Executive Department	2,583 60	4,387 95	4,641 40	4,825 08	5,362 15	5,414 08	5,299 35	5,184 26
Fire Department	66,773 83	61,016 48	61,627 27	72,488 69	82,171 99	85,467 88	78,687 13	80,152 89
Health Department	4,392 39	4,887 62	5,475 37	6,097 88	11,482 98	16,999 55	17,059 35	17,496 64
Inspection of Milk and Vinegar	1,041 24	999 90	1,298 76	1,350 00	1,388 14	1,586 24	1,583 90	1,499 56
Inspection of Provisions, etc	.....	.....	.....	756 06	747 89	793 60	796 19	798 12
Inspection of Wires	7,299 85	12,548 88	9,545 07	10,148 01	10,399 82	11,999 74	10,699 98	11,197 60
Interest	127,180 58	134,036 63	136,877 92	126,289 20	118,099 84	132,099 07	134,396 40	135,795 18
Lamp Department	47,989 92	63,862 68	66,615 93	68,988 81	69,926 61	67,325 31	69,264 96	69,182 20
Law Department	2,830 94	3,044 37	3,206 19	3,272 94	3,970 45	5,197 44	5,189 88	5,192 65
Overseers of the Poor Department	83,104 59	88,370 89	97,570 17	100,810 42	100,841 33	105,379 81	106,373 80	103,983 80
Park Department	.....	.....	339 13	258,276 09	222,475 05	256,490 43	211,783 90	217,188 89
Plumbers' Examiners Department	.....	.....	.....	119 95	153 81	101 05	116 40	111 50
Police Department	98,363 28	104,547 24	111,581 80	110,244 91	110,784 22	110,111 14	113,550 42	116,762 59
Public Library	13,426 22	13,638 57	14,585 44	29,875 62	21,064 83	18,493 00	19,823 36	20,078 38
Public Property	204,185 24	178,324 92	149,280 61	187,922 57	154,289 89	176,264 31	222,216 56	258,628 93
School Department	213,934 48	224,670 38	238,018 21	248,265 10	258,766 08	272,481 50	282,400 45	295,673 51
Sealer of Weights and Measures	1,560 44	1,684 10	1,654 93	1,598 95	1,491 29	1,570 52	1,619 73	1,598 46
Sewer Department	52,893 68	42,324 49	40,597 04	92,635 43	87,553 59	106,688 27	64,231 45	52,828 90
Sinking Funds	75,170 00	91,770 00	104,095 00	100,390 00	106,940 00	93,765 00	104,725 00	111,937 50
State Aid	22,693 05	25,262 30	25,469 80	24,669 55	23,159 91	23,209 03	23,491 36	28,751 62
Stationery and Printing	2,998 70	2,677 87	2,533 89	2,739 13	2,843 14	2,939 79	2,847 32	2,869 03
Street Departm't (Roads and Bridges)	299,284 55	310,948 66	243,032 63	285,348 54	259,953 37	323,912 86	412,986 18	249,167 53
Treasury Department	11,629 03	11,680 62	12,179 00	12,542 01	13,471 50	13,995 46	14,415 54	14,282 77
Water Works Department	297,901 16	497,772 78	430,846 12	420,688 47	758,054 81	1,045,529 76	794,179,98	634,583 00
Taxes: —								
Abatements	19,719 39	23,647 67	24,678 10	26,926 07	19,427 40	17,922 54	22,081 73	27,566 98
County	49,851 13	60,845 07	63,569 57	68,110 25	73,887 84	78,321 11	73,887 84	79,914 80
Metropolitan Sewer	.....	6,809 57	17,363 62	45,483 43	61,886 21	.....	137,297 30	56,818 94
National Bank	6,851 10	7,459 69	6,659 26	7,372 24	7,136 92	6,632 77	7,995 91	7,459 91
State	46,440 00	54,495 00	77,850 00	62,280 00	46,800 00	54,600 00	54,600 00	48,195 00
Total	$1,827,687 63	$2,102,201 62	$2,029,829 49	$2,467,001 85	$2,729,717 48	$3,131,115 43	$3,075,103 20	$2,739,688 33

APPROPRIATIONS AND EXPENDITURES

The Amount of the Several Appropriations made by the City Council during the Year — The Transfers from One Appropriation to Another — The Expenditures in Detail under each Appropriation, and the Unexpended Balances, November 30, 1898.

APPROPRIATIONS AND EXPENDITURES

Assessors' Department.

Appropriation		$13,000 00
Transferred from Contingent Fund		500 00
Transferred from Engineering Department, Assessors' Plans		52 25
		$13,552 25

EXPENDED.

For Salaries of Assessors:—			
John M. Davis	$2,000 00		
J. G. Gooch	2,000 00		
A. J. Green	2,000 00		
Assistant Assessors:—			
Edwin K. Hall	332 00		
Warren Ivers	344 00		
Geo. H. Munroe	360 00		
Arthur M. Stewart	352 00		
Daniel B. Shaughnessy	204 00		
Clerks:—			
Carrie A. Estes	720 00		
Helen P. Hooker	720 00		
Jessie I. R. Waterman	720 00		
Temporary clerks	2,696 88		
		$12,448 88	
Abstracts, Byron Boyd		30 00	
Advertising, Cambridge Chronicle Co.		1 86	
Car tickets, Boston Elevated Railway Co.		55 00	
Directories:—			
E. F. Hunt & Co.	$3 00		
Sampson, Murdock & Co.	5 00		
		8 00	
Stationery, printing, books, etc.:—			
E. W. Bettinson	$1 50		
Cambridge Chronicle Co.	682 75		
Cotton & Gould	143 33		
E. W. S. Jones	90 62		
Stationery Department	85 31		
		1,003 51	
Subscription, Banker and Tradesman		5 00	
Total			$13,552 25

Auditing Department.

Appropriation			$3,500 00

EXPENDED.

For Salaries of			
City Auditor, Harry T. Upham	$2,100 00		
Clerk, Ester L. Cogan	782 50		
Amounts carried forward	$2,882 50		$3,500 00

Auditing Department — Concluded.

Amounts brought forward	$2,882 50		$3,500 00
For Temporary Clerks: —			
Helen K. Small	172 00		
Bessie W. Sprague	11 00		
		$3,065 50	
Directory, E. F. Hunt & Co.		3 00	
Files, George H. Richter & Co.		15 00	
Repairing Numbering Machine		1 50	
Stamp, T. S. Buck		3 75	
Stationery, printing, etc.: —			
Warren T. Billings	$52 75		
Cotton & Gould	30 87		
James H. Cox	6 75		
Lombard & Caustic	30 00		
E. F. McKenna	34 00		
Stationery Department	52 89		
Thorp & Martin Co.	110 00		
John Wilson & Son	75 00		
		392 26	
Subscriptions: —			
F. L. Beunke	2 50		
James Cox	1 50		
		4 00	
Telephone rent and tolls		4 03	
Total			3,489 04
Balance unexpended			$10 96

Bridge Department.

Appropriation			$14,500 00
Transferred from Street Department Bridges			1,600 00
			$16,100 00
Transferred to Contingent Fund			700 00
			$15,400 00
RECEIVED.			
For Rents, Wharfage, etc.		$746 18	
EXPENDED.			
For Salaries of			
Bridge Commissioner and Harbor Master, Wm. J. Marvin	$800 00		
Clerk, Chas. S. Parsons	250 00		
Draw-tenders and Assistants	5,289 15		
		6,339 15	
Advertising		12 87	
Bedding, J. H. Corcoran & Co.		7 63	
Carpenter work, repairing bridge, John T. Scully		958 42	
Car tickets, Boston Elevated Railway Company		52 50	
Cash for labor and supplies: —			
M. F. Corkery	$136 07		
Jas. A. Gorman	5 01		
A. W. Smith	9 97		
N. E. Story	60 38		
		211 43	
Amounts carried forward		$7,582 00	$15,400 00

Bridge Department — Continued.

Amounts brought forward		$7,582 00	$15,400 00
For Cordage, J. Baker		4 52	
Current for Harvard Bridge Draw, Cambridge Electric Light Company		150 00	
Directories, Sampson, Murdock & Co.		4 00	
Fence, W. H. Ellis & Co.		872 58	
Fuel: —			
Metropolitan Coal Company	$97 44		
Thomas & Pike	45 05		
Geo. M. Winslow & Co.	127 12		
		269 61	
Furnishings, J. H. Corcoran & Co.		8 06	
Hardware, tools, supplies: —			
Geo. W. Darling	$2 31		
Dodge, Haley & Co.	56 58		
General Electric Co.	13 01		
W. T. McGuire	25 76		
McKenney & Waterbury	15 00		
F. A. White	19 67		
Whittier Hardware Co.	11 37		
		143 70	
Hose, Boston Woven Hose Co.		6 00	
Ice, Boston Ice Co.		6 00	
Iron work: —			
Thos. J. Emery	$10 98		
Miller & Shaw	101 59		
		112 57	
Labor: —			
Patrick Corkery	$7 00		
Thos. Smith	7 00		
		14 00	
Lighting: —			
Boston Electric Light Co.	$286 16		
Repairs	32 42		
Cambridge Electric Light Co.	1,275 25		
Repairs	11 50		
Welsbach Street Lighting Co.	265 34		
		1,870 67	
Lumber: —			
John S. Clary	$533 33		
George W. Gale Lumber Co.	40 36		
G. H. Jennings, Jr.	162 70		
George McQuesten & Co.	164 25		
E. D. Sawyer & Co.	84 52		
John M. Woods & Co.	6 21		
Wm. H. Wood & Co.	420 07		
		1,411 44	
Oils, paints, etc.: —			
W. T. McGuire	$2 08		
Merrill, Dexter & Co.	34 16		
Standard Oil Co.	10 45		
		46 69	
Painting: —			
Thomas L. Knowles	$2 75		
Samuel Robinson	21 93		
		24 68	
Paving and materials: —			
Austin Ford & Son	$94 29		
Amounts carried forward	$94 29	$12,526 52	$15,400 00

Bridge Department — Concluded.

Amounts brought forward	$94 29	$12,526 52	$15,400 00
For Paving and materials:—			
John T. Scully	91 80		
		186 09	
Repairing door, E. A. Carlisle, Pope & Co.		2 12	
Repairing roofs:—			
John J. Blevins	$7 14		
Morrissey & Coughlin	8 76		
		15 90	
Sheathing Harvard Bridge, Joseph Ross		1,397 50	
Sidewalk, W. H. Ellis & Co.		326 05	
Sprinkling, Proctor Brothers		500 00	
Stationery, printing, postage:—			
City of Boston	$31 06		
Cotton & Gould	3 12		
J. L. Fairbanks & Co.	12 69		
Samuel Hobbs & Co.	10 00		
		$56 87	
Stone, E. Ricker, Son & Co.		4 83	
Sundries		17 28	
Teaming		259 25	
Typewriting		14 50	
Water Rates, City of Boston		32 50	
Total			$15,339 41
Balance unexpended			$60 59

Cambridge Bridge.

Appropriation			$50,000 00
EXPENDED.			
For Salaries:—			
Commissioner, E. D. Leavitt	$520 80		
Engineer, Wm. Jackson	583 33		
Asst. Engineer, F. J. Cutter	12 50		
Axeman, F. J. Steele	128 00		
Draughtsman, Geo. H. Haywood	54 00		
		$1,298 63	
Advertising		48 98	
Borings, etc., E. A. Clarke		1,139 93	
Building temporary bridge, Benjamin Young.		884 00	
Cash expended for travelling expenses, William Jackson		901 50	
Drawings and Photographs, Edmund M. Wheelwright		234 08	
Message, N. E. Telephone Co.		5 00	
Printing, City of Boston		15 22	
Record book, Cotton & Gould		2 75	
Recording deeds, Edwin O. Childs		82	
Typewriting, A. R. Andrews		4 50	
Total			4,535 41
Balance unexpended			$45,464 59

Cemetery Department.

Appropriation			$20,000 00
RECEIVED.			
For brick and slate graves and foundations	$1,332 66		
Burials	3,842 00		
Care	3,258 01		
Chapel	6 00		
Grading and Sodding	186 55		
Hay	30 00		
Interest on Cemetery Fund	1,533 16		
Myrtle graves	5 00		
Sales	8,672 55		
Sundries	220 44		
	$19,086 37		
EXPENDED.			
For Salaries of			
Superintendent, Chas. S. Childs	$1,600 00		
Asst. Superintendent, Henry C. Hobbs	1,003 75		
Bookkeeper, J. Watson Taylor	1,095 00		
Clerk, Edward J. Brandon	100 00		
Laborers	11,916 77		
		$15,715 52	
Bricks, Parry Brothers & Co.		54 00	
Brooms and evergreen, Stephen Adams		17 00	
Cabinet, cards, etc., The Associated Underwriters' Bureau		246 00	
Canvas covers, James Martin & Son		16 45	
Carpentry:—			
Steadman A. Rice	$54 21		
I. B. Rice	5 30		
		59 51	
Carriage hire:—			
J. Callahan	$11 00		
Frank P. Merrill	17 50		
Ralph Smith & Co.	9 00		
G. F. Whiting & Co.	15 00		
		52 50	
Car tickets, Boston Elevated Railway Company		30 00	
Chairs, Pettingell & Pear		8 50	
Cutting figures on stone, Wm. A. McNamee		90 39	
Decorating, M. C. Beedle		5 50	
Dinners, Colonial Club		35 25	
Directories, W. A. Greenough & Co.		6 00	
Disinfectant, C. W. Lerned & Co.		16 80	
Expressage, Hatch & Co.		11 40	
Fence, Patterson & Fox		198 00	
Filling, loam and sand, Jeremiah Sullivan		844 41	
Fuel, Dennis, Thompson, Pierce	$51 00		
Weighing, H. W. Brooks	60		
		51 60	
Furnishings, Worcester Bros.		12 40	
Gravel, Jeremiah Sullivan		279 50	
Grave boxes, covers and markers, Jos. W. Grigg		156 61	
Hardware, tools and supplies:—			
Burditt & Bynner	$95 36		
F. A. White	77 97		
Sundry persons	14 71		
		188 04	
Amounts carried forward		$18,095 38	$20,000 00

Cemetery Department — Concluded.

Amounts brought forward		$18,095 38	$20,000 00
Harness repairs		5 25	
Hay and grain, E. R. Luke & Co.		113 03	
Horseshoeing:—			
Wm. Balmer	$18 50		
G. W. Lowd	17 50		
		36 00	
Hose, F. A. White		22 50	
Labor and materials, Water Works		27 51	
Lumber, cement, Geo. W. Gale Lumber Company		82 17	
Manure, John Doody		99 00	
Mill work, M. F. Tracy & Son		11 71	
Plants and seeds:—			
J. Breck & Sons	$3 77		
H. L. Cameron	68 00		
J. F. O'Brien	18 50		
		90 27	
Plumbing, D. J. Wild & Co.		12 96	
Repairing furnace, D. J. Wild & Co.		13 70	
Repairing roof, John J. Blevins		29 78	
Repairing tools, Chapman Carriage Company		40 41	
Scrapings, Street Department		6 00	
Slate vault, W. L. Lockhart & Co.		9 00	
Signs, Broadway Iron Foundry		196 30	
Snow ploughing, John Doody		39 00	
Sods, James Gray		139 50	
Stationery, printing, etc.:—			
Amee Bros.	$34 93		
Cotton & Gould	64 37		
Lombard & Caustic	50 85		
A. E. Martell & Co.	19 00		
		169 15	
Stone posts, Alexander Wight		330 04	
Sundries		7 54	
Teaming		117 50	
Telephone rent and tolls		79 35	
Varnishing, etc., C. S. Brookings		8 15	
Watering streets		51 46	
Total			19,832 66
Balance unexpended			$167 34

City Clerk Department.

Appropriation		$7,500 00
Transferred from Contingent Fund		1 10
		$7,501 10

RECEIVED.

For Fees from sundry persons	$2,640 90

EXPENDED.

For Salaries of			
City Clerk, Edward J. Brandon	$3,000 00		
Assistant City Clerk, Albert M. Pear	1,400 00		
Amounts carried forward	$4,400 00		$7,501 10

City Clerk Department — Continued.

Amounts brought forward			$7,501 10
For Salaries of Clerks:—			
Amanda Richardson	$600 00		
Annie E. Conley	424 50		
Temporary Clerks:—			
Sarah S. Jacobs	144 00		
Anne Jacobs	250 00		
		$5,818 50	
Advertising:—			
F. S. Hill	$6 00		
Sundry persons	6 60		
		12 60	
Binding, J. H. H. McNamee		19 90	
Canvassing for births:—			
John L. Andrews	$42 00		
Emile J. Grenier	70 50		
Warren Ivers	72 00		
Jas. E. Lennon	67 50		
John Loughrey	36 00		
John T. Lynch	57 00		
Geo. H. Munroe	45 00		
		390 00	
Car tickets, Boston Elevated Railway Company		25 00	
Directories:—			
E. F. Hunt & Co.	$3 00		
Sampson Murdock & Co.	5 00		
		8 00	
Expressage:—			
Hatch & Co.	$5 25		
Sundry persons	3 72		
		8 97	
Legislative bulletin, M. Thompson		$27 40	
Posting and serving notices:—			
Jas. H. Cox	$5 60		
John Donnelly & Sons	3 00		
Walter F. Hayward	25 50		
Jas. E. Lennon	20 00		
John Mahady	16 30		
Frank E. Shaw	5 90		
		76 30	
Recording deeds, E. O. Childs		9 22	
Repairing typewriter, Smith Premier Typewriter Co.		11 60	
Revenue stamps, Edward J. Brandon		23 45	
Reporting births		452 75	
Stationery, printing and typewriting supplies, etc:—			
F. L. Beunke	$11 75		
Warren T. Billings	21 50		
W. H. Burbank	9 00		
Cambridge Chronicle Company	50 01		
Cotton & Gould	44 52		
H. J. Duffy	31 00		
J. Frank Facey	127 61		
John H. Ford	16 50		
Oliver B. Graves	8 75		
E. W. S. Jones	15 50		
E. F. McKenna	15 50		
Amounts carried forward	$351 64	$6,883 69	$7,501 10

City Clerk Department — Concluded.

Amounts brought forward	$351 64	$6,883 69	$7,501 10
For Stationery, printing and typewriting supplies, etc:—			
Henry M. Meek	17 50		
Stationery Department	122 94		
Louis F. Weston	7 00		
Edward W. Wheeler	14 25		
Sundry persons	8 10		
		521 43	
Stamps:—			
Boston Stencil and Stamp Works	$8 10		
T. S. Buck	6 65		
		14 75	
Subscriptions:—			
James Cox	$1 50		
Cambridge Chronicle Company	5 00		
		6 50	
Sundries		11 25	
Telephone rent and tolls		63 48	
Total			$7,501 10

City Clerk Department.

Printing Town Records.

Appropriation			$1,200 00
Transferred to Contingent Fund			1,000 00
			$200 00
EXPENDED.			
For Proof-reading, Sarah S. Jacobs		$119 50	
Total			119 50
Balance unexpended			$80 50

City Clerk Department.

Russell Memorial Volume.

Appropriation			$500 00
EXPENDED.			
For Printing:—			
J. Frank Facey	$1 50		
Edw. W. Wheeler	137 72		
Total			139 22
Balance unexpended			$360 78

City Messenger Department.

Appropriation			$2,800 00
Transferred from Stationery and Printing			60 00
			$2,860 00
EXPENDED.			
For Salaries of			
City Messenger, Francis L. Pratt	$1,800 00		
Amounts carried forward	$1,800 00		$2,860 00

City Messenger Department — Concluded.

Amounts brought forward	$1,800 00		$2,860 00
Assistant, C. M. Jones	626 00		
		$2,426 00	
Car tickets, Boston Elevated Railway Company		30 00	
Directories:—			
E. F. Hunt & Co.	$3 00		
Sampson, Murdock & Co.	5 00		
		8 00	
Expressage, Hatch & Co.		25 05	
Rent of P. O. Box, H. A. Thomas		10 00	
Stationery, printing:—			
Stationery Department	$135 11		
Warren T. Billings	6 00		
		141 11	
Subscriptions, F. L. Beunke		8 75	
Sundries		8 80	
Telephone rent and tolls		201 33	
Total			2,859 04
Balance unexpended			$ 96

Civil Service Department.

Appropriation			$250 00
EXPENDED.			
For Salary of Clerk, Harry L. Lincoln		$200 00	
Fee for Justice of the Peace Commission, Commonwealth of Massachusetts		7 00	
Stationery, printing, Thorp & Martin Company		39 90	
Sundries		1 95	
Total			248 85
Balance unexpended			$1 15

Clerk of Committees Department.

Appropriation			$4,000 00
EXPENDED.			
For Salaries of			
Clerk of Committees, John McDuffie	$2,400 00		
Assistant, Eben W. Pike	1,200 00		
		$3,600 00	
Binding, David Farquhar		6 00	
Car tickets, Boston Elevated Railway Co.		20 00	
Directories:—			
E. F. Hunt & Co.	$3 00		
W. A. Greenough & Co.	3 00		
Sampson, Murdock & Co.	5 00		
		11 00	
Stamps, T. S. Buck		13 50	
Stationery, printing:—			
Cambridge Chronicle Co.	$34 50		
Cotton & Gould	52 35		
E. F. McKenna	30 25		
Stationery Department	115 40		
		232 50	
Amounts carried forward		$3,883 00	$4,000 00

Clerk of Committees Department — Concluded.

Amounts brought forward		$3,883 00	$4,000 00
For Stenography, Miss G. W. Sanborn		15 00	
Sundries		14 39	
Typewriter (exchange) Geo. H. Richter & Co.		60 00	
Total			3,972 39
Balance unexpended			$27 61

Contingent Fund.

Appropriation			$12,000 00
Transferred to sundry departments			6,198 47
			$5,801 53
Transferred from sundry departments			5,500 00
			$11,301 53

RECEIVED.

For Damages recovered: —			
Cambridge Electric Light Company	$752 93		
A. H. Hews	752 92		
		$1,505 85	
Hawkers' and pedlers' licenses		75 00	
Liquor licenses		48 00	
Refund of damages		50 00	
		$1,678 85	

EXPENDED.

For Advertising, Cambridge Chronicle Company		30	
Annual Digest, West Publishing Company		32 00	
City Council expenses: —			
Salaries: —			
Clerk, Edw. A. Counihan	$300 00		
Page, Chas. M. Jones	100 00		
Carriage hire	109 00		
Car tickets, Boston Elevated Railway Company	550 00		
Draping Armory, New England Decorating Company	50 00		
Engrossing resolutions	31 00		
Floral emblems	45 26		
Lunches	98 20		
		1,283 46	
Committee on new bridge, carriage hire		32 00	
Committee on Somerville boundary: —			
Carriage hire	$13 00		
Refreshments	9 60		
		22 60	
Damages awarded and suits settled: —			
Roger J. Abbott	$50 00		
Geo. W. Caldwell	200 00		
Guy E. Dame	16 65		
Michael Griffin	2,400 00		
Sarah E. Hunt	60 00		
Ernest W. Longfellow	56 16		
Mary McDermott	110 00		
Wm. R. Macdonald	1,000 00		
Douglas R. Rice	2 50		
Amounts carried forward	$3,895 31	$1,370 36	$11,301 53

Contingent Fund — Concluded.

Amounts brought forward	$3,895 31	$1,370 36	$11,301 53
For Damages awarded and suits settled:—			
Margaret A. Sutton	550 00		
Jos. E. Wall	100 00		
		4,545 31	
Dredging Broad Canal under First and Third Streets bridges, Baker-Hunnewell Co.		200 00	
Expenses, exterminating "brown tail moth," printing, Lombard & Caustic		16 00	
Flag-raising at City Hall: —			
Fireworks, Masten & Wells Fireworks Manufacturing Co.	$7 25		
Flag, L. W. Ferdinand & Co.	28 00		
Flag-pole, W. H. Norris	85 00		
Refreshments, M. R. Jones	15 00		
		135 25	
Invalid tax titles:—			
Wm. A. Browning	$9 80		
Alonzo V. Lynde	42 66		
Willard Welsh	42 58		
		95 04	
Liquor licenses, Commonwealth of Massachusetts		12 00	
Mayor's reception, New Year's Day, plants and flowers, W. H. Murdock		20 00	
Memorial Day expenses		1,000 00	
Publishing "Cambridge Fifty Years a City":—			
Mailing boxes, Chas. Place	$ 75		
Postage, Stationery Department	11 74		
Printing, H. O. Houghton & Co.	517 30		
		529 79	
Rebate on Park Betterment assessment, Wm. R. Bolton		32 50	
Rebate on taxes for 1897:—			
Horace O. Bright	$49 44		
Geo. G. Crocker and E. P. Fisk, trustees	84 96		
Mary G. Fisk	55 08		
Tilton heirs	29 88		
		219 36	
Recording deeds		180 42	
Ringing bells on holidays		117 00	
Services of consulting engineers on Prison Point Street grade crossing:—			
Chas. A. Allen	$423 30		
John W. Ellis	2,090 00		
J. R. Worcester	78 00		
		2,591 30	
Total			11,064 33
Balance unexpended			$237 20

Election Expenses, City Clerk.

Appropriation		$5,300 00
Transferred from Contingent Fund		12 37
		$5,312 37
EXPENDED.		
For Precinct Officers	$3,267 00	
Police Officers	280 00	
Amounts carried forward	$3,547 00	$5,312 37

Election Expenses, City Clerk — Concluded.

Amounts brought forward		$3,547 00	$5,312 37
For Bell-ringers		26 00	
Clerical assistance, Anne Jacobs		25 00	
Advertising:—			
Warren T. Billings	$40 00		
Cambridge Chronicle Company	15 69		
F. S. Hill	66 75		
Sacred Heart Review	12 00		
Times Publishing Company	67 00		
		201 44	
Ballot boxes:—			
Commonwealth of Massachusetts	$250 00		
W. H. Norris	20 00		
		270 00	
Barge hire:—			
A. Nixon	52 00		
John Nixon	72 00		
		124 00	
Binding, etc., J. H. H. McNamee		128 05	
Carriage hire:—			
Aaron Hale	$18 00		
Frank P. Merrill	4 00		
G. F. Whiting & Co.	16 00		
		38 00	
Carpentry, W. H. Norris		8 06	
Caucus laws, Richard L. Gay		9 00	
Cheese-cloth, etc., J. H. Corcoran & Co.		75	
Expressage and moving furniture:—			
P. Biggin	$19 25		
Sundry persons	3 90		
		23 15	
Hardware, Burditt & Bynner		9 70	
Labor, T. J. Denton		55 72	
Lunches, W. S. Sprague		16 92	
Posting and serving:—			
Geo. H. Munroe	$16 50		
Patrick J. White	6 00		
Jas. H. Cox	3 15		
		25 65	
Repairing box, Robert S. Robson		21 00	
Sign cards, C. H. Buck & Co.		5 50	
Stationery, printing, postage:—			
F. L. Beunke	$10 00		
Warren T. Billings	21 00		
Cambridge Chronicle Company	33 50		
Caustic & Claflin	58 25		
Cotton & Gould	92 65		
James Cox	28 50		
J. Frank Facey	105 00		
John H. Ford	20 00		
Lombard & Caustic	331 27		
E. F. McKenna	29 25		
Stationery Department	40 01		
		769 43	
Table for returns, Geo. Davis		8 00	
Total			5.312 37

Election Expenses, Registrars of Voters.

Appropriation			$3,500 00
EXPENDED.			
For salaries of Registrars of Voters and Clerk: —			
Isaac Bradford	$500 00		
Wm. J. Breen	500 00		
James Cox	500 00		
Isaac S. Pear	600 00		
		$2,100 00	
Clerical services: —			
Anne Jacobs	$218 75		
Isaac Bradford, Jr.	3 00		
		221 75	
Clerical assistance, Recount: —			
Isaac Bradford, Jr.	$6 30		
Warren Ivers	5 10		
J. Henry Webber	5 10		
		16 50	
Advertising: —			
Warren T. Billings	$35 00		
D. A. Buckley	32 75		
Cambridge Chronicle Company	15 89		
F. S. Hill	31 38		
Times Publishing Company	39 12		
		154 14	
Binding, J. H. H. McNamee		77 75	
Books, E. W. S. Jones		24 30	
Carpentry, W. H. Norris		38 00	
Carriage hire, Aaron Hale		7 00	
Labor, Thos. J. Denton		4 20	
Posting, Geo. H. Munroe		33 00	
Printing: —			
Lombard & Caustic	$25 25		
John Wilson & Son	784 63		
Sundry persons	6 75		
		816 63	
For Stationery: —			
Stationery Department		4 77	
Sundries		1 19	
Total			3,499 23
Balance unexpended			$ 77

Election Expenses, Superintendent of Public Buildings.

Appropriation			$1,500 00
Transferred from Public Property Shooting Range			600 00
			$2,100 00
RECEIVED.			
For error on bills	$10 00		
EXPENDED.			
For carpentry, W. H. Norris		$530 33	
Election booths, Van Dorn Iron Works		584 00	
Furniture: —			
Phillips Bros. & Co.	$42 00		
John Quin	23 00		
		65 00	
Amounts carried forward		$1,179 33	$2,100 00

Election Expenses, Superintendent of Public Buildings — Concluded.

Amounts brought forward		$1,179 33	$2,100 00
Heating apparatus, S. C. Higgins		10 00	
Lighting apparatus, Geo. F. Dickson		16 00	
Preparing rooms for voting		305 79	
Rent:—			
Chas. Beck Post 56, G. A. R.	$50 00		
Citizens' Trade Association	15 00		
E. L. Green	15 00		
Mount Sinai Building Association	60 00		
J. F. O'Brien	40 00		
Odd Fellows' Hall Association	40 00		
The Prospect Union	40 00		
Red Jacket Veteran Firemen's Association	35 00		
St. John's Literary Institute	125 00		
Union Hall Association	95 00		
		515 00	
Services as special police officer, Wm. Holden		5 00	
Stoves, A. Simpson, agent		16 00	
Sundries		2 75	
Total			2,049 87
Balance unexpended			$50 13

Engineering Department.

Appropriation			$11,000 00
RECEIVED.			
For services of city engineer		$1,000 00	
EXPENDED.			
For Salaries:—			
Engineer, L. M. Hastings	$3,000 00		
Assistants	6,341 48		
Clerk, Mary E. Rowen	383 75		
		9,725 23	
Binding, Cotton & Gould		16 50	
Carpentry, W. H. Norris		19 93	
Carriage hire, G. F. Whiting & Co.		30 00	
Car tickets, Boston Elevated Railway Company		200 00	
Cotton, D. W. Hyde & Co.		4 46	
Directory, Sampson, Murdock & Co.		5 00	
Expressage, sundry persons		3 55	
Estimate of cost to move buildings on Belmont Street, R. Wentworth		30 00	
Hardware, tools and repairs, and supplies:—			
Greene & Co.	$22 30		
Miller & Shaw	39 11		
F. A. White	21 40		
Sundry persons	6 50		
		89 31	
Heliotypes, Heliotype Printing Company		97 00	
Labor and materials, assisting placing boundaries, Greene & Co.		31 50	
Massachusetts Public Statutes, Little, Brown & Co.		10 15	
Photograph supplies and blue prints:—			
Chas. E. Moss	$35 10		
Sundry persons	3 47		
		38 57	
Amounts carried forward		$10,301 20	$11,000 00

Engineering Department — Concluded.

Amounts brought forward		$10,301 20	$11,000 00
For Repairing transit, etc., and leather box, Buff & Berger		44 95	
Stationery, printing, drawing materials: —			
Cambridge Chronicle Company	$31 75		
Cotton & Gould	13 75		
John H. Ford	42 30		
Frost & Adams	69 61		
Lombard & Caustic	16 55		
E. G. Soltmann	69 13		
Stationery Department	39 78		
Sundry persons	3 33		
		286 20	
Telephone rent and tolls		99 90	
Testing rods, etc., Walter W. Field		5 83	
Total			10,738 08
Balance unexpended			$261 92

Engineering Department, Assessors' Plans.

Appropriation			$500 00
Transferred to Assessors' Department			52 25
			$447 75
EXPENDED.			
For Services of engineers		$409 26	
Total			409 26
Balance unexpended			$38 49

Executive Department.

Appropriation			$5,200 00
EXPENDED.			
For Salaries of			
Mayor, Alvin F. Sortwell	$3,500 00		
Clerk, Edward A. Counihan	1,000 00		
Stenographer, Georgie W. Sanborn	260 83		
Clerical assistance, J. Henry Webber	5 00		
		4,765 83	
Binding, J. H. H. McNamee		14 00	
Carriage hire: —			
J. E. Fabyan	$5 00		
Ralph Smith & Co.	6 00		
		11 00	
Chair, The Cobb-Buzzell Co.		12 00	
Directory, Sampson, Murdock & Co.		5 00	
Map, Geo. H. Walker & Co.		12 00	
Stationery, printing, typewriter supplies: —			
Cambridge Chronicle Company	$6 25		
Cotton & Gould	28 80		
J. Frank Facey	6 50		
Lombard & Caustic	31 56		
John A. Lowell & Co.	14 73		
Amounts carried forward	$87 84	$4,819 83	$5,200 00

Executive Department — Concluded.

Amounts brought forward	$87 84	$4,819 83	$5,200 00
For Stationery, printing, typewriter supplies:—			
M. R. Warren Co.	21 12		
Stationery Department	59 14		
Sundry persons	7 30		
		175 40	
Sundries		6 48	
Telephone rent and tolls		182 55	
Total			5,184 26
Balance unexpended			$15 74

Filling City Lands.

Appropriation			$4,900 00
EXPENDED.			
For Filling city lands, N. E. Dredging Company		$3,492 75	
Total			3,492 75
Balance unexpended			$1,407 25

Fire Department.

Appropriation			$81,000 00
Transferred to Contingent Fund			800 00
			$80,200 00
RECEIVED.			
For Care of horse		$90 00	
Error on pay-roll		18 75	
		$108 75	
EXPENDED.			
For Salaries of			
Chief, Thos. J. Casey	$1,800 00		
Assistant Engineers:—			
N. W. Bunker	375 00		
W. B. Cade	375 00		
Permanent men as per pay-rolls	47,090 25		
Call men as per pay-rolls	17,159 46		
Substitutes:—			
John D. Shea	110 00		
Thos. A. Montgomery	31 25		
		66,940 96	
Apparatus and repairs:—			
Abbot-Downing Co.	$110 00		
C. Callahan Co.	25 50		
Wm. Campbell & Co.	99 30		
Chapman Carriage Co.	95 05		
S. F. Hayward & Co.	8 00		
Manchester Locomotive Works	41 75		
Peter McMurray	138 68		
Miller & Shaw	37 14		
Amounts carried forward	$555 42	$66,940 96	$80,200 00

Fire Department — Continued.

Amounts brought forward	$555 42	$66,940 96	$80,200 00
For Apparatus and repairs: —			
New York Nozzle Co.	30 00		
Jos. Palmer	16 25		
Geo. Patterson	5 50		
Scrannage Bros.	6 02		
Chas. Waugh & Co.	21 70		
Sundry persons	12 70		
		647 59	
Brooms, F. Pelkey		21 00	
Carpentry: —			
N. W. Bunker	$23 85		
W. H. Norris	215 23		
John Quin	37 06		
		276 14	
Carriage hire: —			
J. Callahan	$4 00		
C. H. Lake	8 00		
Frank P. Merrill	8 00		
		20 00	
Carriage repairs, etc.: —			
Chas. E. Berry	$74 30		
F. Ivers & Son	5 00		
Peter McMurray	39 94		
		119 24	
Disinfectant, Sulpho-Naphthol Company		24 00	
Expressage and teaming: —			
H. W. Bettinson & Co.	$6 05		
E. D. Dolhenty & Co.	11 35		
Elliott & Duvey	7 00		
Savage & Son	6 20		
Sundry persons	7 54		
		38 14	
Fence, A. Simpson		110 00	
Fire hats and repairs, Hopkins & Wright		21 50	
Fuel: —			
L. G. Burnham & Co.	$236 70		
Dennis, Thompson, Pierce Co.	1,153 36		
Metropolitan Coal Co.	217 00		
H. Wellington & Co.	6 50		
Weighing, H. W. Brooks	14 00		
		1,627 56	
Furniture, furnishings, bedding, Worcester Bros.		89 30	
Hardware, tools and supplies: —			
Brock Bros.	$30 09		
Burditt & Bynner	179 28		
Harry Hunt	5 00		
Jas. Maitland	2 20		
J. F. Pennell	66 05		
J. R. Worthen	1 00		
		283 62	
Harness and repairs: —			
Chas. E. Berry	$27 00		
James Curry	8 85		
Owen Doherty	85 70		
F. Ivers & Son	21 90		
G. A. Morse	7 50		
Wm. H. Roberts	102 60		
		253 55	
Amounts carried forward		$70,472 60	$80,200 00

Fire Department — Continued.

Amounts brought forward		$70,472 60	$80,200 00
For Hay, grain, straw:—			
J. S. Bradeen	$1,247 64		
Otis S. Brown & Co.	186 02		
E. R. Luke & Co.	1,717 05		
Geo. G. Wright	159 67		
		3,310 38	
Heating buildings, City Buildings Department		375 00	
Horses, P. H. Dardis		745 00	
Horseshoeing:—			
Wm. Balmer	$43 25		
Wm. Bell	51 75		
D. L. Bolger	47 00		
T. Burke	48 50		
P. J. Callahan	58 50		
P. H. Dardis	35 50		
W. F. Garrett	84 00		
John F. Gurry & Sons	134 00		
C. J. McCarthy	41 50		
Bernard Smith	113 00		
Thos. Smith	67 75		
		724 75	
Hose, etc., Boston Woven Hose Company		625 00	
Ice:—			
Cambridge Ice Company	$18 60		
Fresh Pond Ice Company	30 55		
Independent Ice Company	6 00		
		55 15	
Insignias, B. Goldsmith		18 75	
Inspecting boilers, Everett B. Dyer, State Boiler Inspector		18 90	
Labor and materials, Street Department, paving		265 10	
Ladders and repairs, C. W. H. Moulton & Co.		247 55	
Lamps:—			
Shelby Electric Company	$25 20		
Lynn Electric Novelty Company	4 00		
		29 20	
Lanterns, Boston Woven Hose Company		15 00	
Laundry work, University City Laundry Company		181 93	
Lawn grass, R. and J. Farquhar & Co.		5 75	
Lighting:—			
Cambridge Electric Light Company	$234 45		
Cambridge Gas Light Company	554 54		
		788 99	
Loam, gravel, edgestone, etc., Engine House 3, Thomas O'Hara		488 15	
Lumber, Geo. W. Gale Lumber Company		18 06	
Oil, polish, etc.:—			
Clark, Brown & Co.	$30 00		
Lustralis Manufacturing Company	24 00		
Standard Oil Company	33 13		
		87 13	
Mason work:—			
Thos. Leahy & Son	$38 74		
Henry McGahey	5 68		
		44 42	
Mill work, M. F. Tracy & Son		22 19	
Painting, glazing:—			
J. D. Ford	$20 53		
Amounts carried forward	$20 53	$78,539 00	$80,200 00

Fire Department — Concluded.

Amounts brought forward	$20 53	$78,539 00	$80,200 00
For painting, glazing:—			
D. O. Gunnison	108 45		
J. J. Shedd	10 13		
Sundry persons	10 55		
		149 66	
Paving, Austin Ford & Son		279 50	
Plumbing: —			
Brock Brothers	$7 12		
W. Haley	8 35		
A. J. Marks	11 92		
H. L. Rose	70 05		
		97 44	
Refreshments: —			
M. R. Jones	$15 00		
A. V. Millett	19 80		
		34 80	
Repairing roof, John J. Blevins		245 53	
Stationery, printing: —			
Cambridge Chronicle Company	$11 50		
Cotton & Gould	7 87		
James Cox	11 50		
Lombard & Caustic	10 33		
Stationery Department	4 54		
		45 74	
Steamfittings, Brock Brothers		13 52	
Soap, Chas. R. Teele		13 10	
Sundries		13 00	
Supplies: —			
J. A. Holmes & Co.	$48 03		
Sundry persons	8 37		
		56 40	
Telephone rent and tolls		117 45	
Use of men and horses: —			
T. A. Callaghan	$75 00		
F. J. Coulter	41 00		
P. H. Dardis	51 00		
John Doody	69 00		
Elliott & Duvey	73 00		
Robert Fawcett	35 00		
Austin Ford & Son	80 00		
Thos. F. Maher	55 00		
Thos. McSorley	54 00		
		533 00	
Vitriol, oil, Cochran Chemical Co.		14 75	
Total			80,152 89
Balance unexpended			$47 11

Health Department.

Appropriation		$17,500 00
RECEIVED.		
For Ambulance	$15 00	
Horse, McPherson Bros.	165 00	
	$180 00	
Amount carried forward		$17,500 00

Health Department — Continued.

Amount brought forward			$17,500 00
EXPENDED.			
For Salaries of			
Medical Inspector, Dr. E. Farnham	$3,000 00		
Secretary, James B. Soper	1,200 00		
Clerk, B. E. Dunn	800 00		
Sanitary Inspectors: —			
Chas. A. Lincoln	870 94		
John McCormick	853 80		
Daniel W. Parker	815 04		
Drivers of vans: —			
John A. Jackson	812 72		
Richard M. O'Brien	813 01		
		9,165 51	
Advertising, sundry persons		6 19	
Ambulance, Chas. Waugh & Co.		585 00	
Ambulance repairs and supplies, Chas. Waugh & Co.		47 75	
Analyses of ice and water, F. A. Dunbar		88 83	
Bacteriologist, Geo. B. Henshaw		1,080 00	
Board of sundry persons at Cambridge Hospital		2,854 88	
Car tickets, Boston Elevated Railway Company		450 00	
Carpentry, W. H. Norris		23 84	
Carriage hire, Whiting & Co.		34 50	
Cash paid for burying dead animals: —			
M. J. Folsom	$9 25		
John F. Murray	5 25		
F. B. Pullen	16 75		
Jas. B. Soper	17 90		
		49 15	
Directories, E. F. Hunt & Co.		3 00	
Drugs, prescriptions, Walter A. Claflin		143 00	
Expressage, sundry persons		1 45	
Furniture: —			
Derby Desk Company	$48 85		
Library Bureau	55 00		
		103 85	
Gas, Cambridge Gas Light Company		8 39	
Harness and repairs, Wm. H. Roberts		15 00	
Horse board and storage, G. F. Whiting & Co.		500 00	
Horse clipping, Ferris & Co.		7 00	
Horseshoeing, W. F. Garrett		48 75	
Inspection, Chas. A. Lincoln		7 53	
Medical supplies and apparatus: —			
Geo. B. Henshaw	$11 80		
Franklin C. Robinson	18 00		
Wm. C. Wright	30 00		
		59 80	
Painting, etc., J. L. P. Ackers		28 90	
Professional services, F. G. Cook		154 00	
Pung, Henderson Bros.		45 00	
School Inspectors: —			
Frank F. Carr, M.D.	$196 82		
Geo. P. Cogswell, M.D.	196 82		
Jas. D. Couch, M.D.	29 32		
Bessie D. Davis, M.D.	196 82		
A. W. Dudley, M.D.	196 82		
E. A. McCarthy, M.D.	28 27		
W. A. Putnam, M.D.	196 82		
N. V. Shannon, M.D.	196 82		
		1,238 51	
Amounts carried forward		$16,749 83	$17,500 00

Health Department — Concluded.

Amounts brought forward		$16,749 83	$17,500 00
For Serving notices: —			
Fred H. Seavey	$29 04		
Walter C. Wardwell.	7 70		
Sundry persons	6 03		
		42 77	
Stamps and pads: —			
T. S. Buck	$5 00		
H. C. Dimond & Co.	3 00		
		8 00	
Stationery, printing etc.: —			
Cambridge Chronicle Company	$168 67		
Cotton & Gould	30 08		
Lombard & Caustic	19 52		
Stationery Department	12 50		
E. W. Wheeler	21 00		
Sundry persons	10 00		
		261 77	
Sundries		15 37	
Telephone rent and tolls		353 50	
Tools, hardware, supplies: —			
Burditt & Bynner	$29 99		
Walworth Manufacturing Company	9 41		
		39 40	
Use of carriage, G. F. Whiting & Co.		26 00	
Total			17,496 64
Balance unexpended			$3 36

Inspection of Milk and Vinegar.

Appropriation			$1,500 00
RECEIVED.			
For milk and butterine licenses	$170 00		
EXPENDED.			
For Salaries of			
Inspector, F. A. Dunbar	$900 00		
Deputy, J. F. Wheeler	422 00		
		$1,322 00	
Car tickets, Boston Elevated Railway Company		10 00	
Cash paid for samples, J. F. Wheeler		66 02	
Drugs and medicines, Walter A. Claflin		20 60	
Expressage, sundry persons		1 75	
Hardware, Brock & Eaton		17 79	
Printing: —			
Warren T. Billings	$5 00		
Cambridge Chronicle Company	19 00		
Lombard & Caustic	5 98		
		29 98	
Seals, C. C. Hoffman & Co.		6 00	
Stationery, Stationery Department		16 72	
Sundries		8 70	
Total			1,499 56
Balance unexpended			$ 44

Inspection of Provisions.

Appropriation			$800 00
EXPENDED.			
For Salary of Inspector of Provisions, C. E. Hadcock		$700 00	
Chemicals, drugs: —			
Walter A. Claflin	$66 85		
Henry Thayer & Co.	23 38		
Sundry persons	4 45		
		94 68	
Cotton, flannel, etc., Horace G. Low		3 44	
Total			798 12
Balance unexpended			$1 88

Inspection of Wires.

Appropriation			$10,000 00
Transferred from Lamp Department			800 00
Transferred from Contingent Fund			400 00
			$11,200 00
RECEIVED.			
For labor and materials	$279 14		
EXPENDED.			
For Salaries of			
Inspector of Wires, Chas. F. Hopewell	$1,000 00		
Assistants	5,884 86		
Clerk, Lillian W. Hyde	301 00		
Temporary Clerk	1 25		
		7,187 11	
Apparatus, repairs and electrical supplies: —			
Anchor Electric Company	$53 11		
Automatic Time Stamp Company	85 00		
Barbour-Stockwell Company	65 00		
August Becker	27 25		
Bibber-White Company	119 75		
W. E. Decrow	22 10		
Edes Manufacturing Company	27 72		
Electric Gas Light Company	140 66		
Electric Protection Company	7 50		
R. A. Faye & Co.	5 50		
General Electric Company	12 00		
A. H. Hews & Co.	100 00		
C. S. Knowles	161 14		
Municipal Signal Company	18 75		
Wm. J. Murdock & Co.	66 00		
N. E. Gamewell Company	47 50		
Perry & Tompson	11 76		
Pettingell-Andrews Company	176 96		
Simplex Electric Company	581 05		
Standard Brass Company	39 39		
Standard Underground Cable Company	26 25		
Geo. M. Stevens	37 75		
United States Fire and Police Telegraph Company	10 25		
Western Electric Company	7 69		
Whitman & Couch	14 50		
Amounts carried forward	$1,864 58	$7,187 11	$11,200 00

Inspection of Wires — Continued.

Amounts brought forward	$1,864 58	$7,187 11	$11,200 00
For apparatus, repairs and electrical supplies :—			
S. S. White, Dental Company	11 90		
Ziegler Electric Company	50 00		
Sundry persons	24 39		
		1,950 87	
Bicycle repairs		4 80	
Carpentry and mill work : —			
Ira G. Hersey	$31 37		
W. H. Norris	6 23		
M. F. Tracy & Son	3 95		
		41 55	
Car tickets, Boston Elevated Railway Company		85 00	
Cases, Albert E. Hughes & Co.		66 00	
Expressage : —			
Hatch & Co	$16 18		
Sawin's Express	24 18		
Sundry persons	4 50		
		44 86	
Furnishings, bedding, etc. : —			
C. B. Moller	$2 50		
Worcester Bros.	60 95		
		63 45	
Hardware, tools, and supplies : —			
Brock Bros.	$24 14		
Burditt & Bynner	76 38		
Chandler & Farquhar	7 59		
J. D. Jewett & Co.	122 60		
Standard Brass Co.	13 33		
A. J. Wilkinson & Co.	34 67		
Geo. A. Wood	26 98		
Sundry persons	8 42		
		310 11	
Harness and repairs, etc. : —			
G. A. Morse	$24 50		
Sundry persons	8 92		
		33 42	
Heating building, City Buildings Department		100 00	
Horse board : —			
Irving Blake	$300 50		
Fire Department	90 00		
		390 50	
Horseshoeing, William Balmer		83 25	
Lighting :—			
Cambridge Electric Light Company	$66 18		
Poles	33 00		
		99 18	
Lumber, George W. Gale Lumber Company		18 47	
Mason work, A. Chapin		43 23	
Paint, etc. : —			
Wadsworth, Howland & Co.	$7 10		
I. H. Wiley & Co.	31 81		
		38 91	
Painting, glazing :—			
Robert J. Buchanan	$28 25		
W. J. Edwards	10 95		
		39 20	
Amounts carried forward		$10,599 91	$11,200 00

Inspection of Wires — Concluded.

Amounts brought forward		$10,599 91	$11,200 00
For Poles, C. W. H. Moulton & Co.		3 50	
Refreshments		5 10	
Roof repairs, John J. Blevins		33 98	
Rubber tires, L. C. Chase & Co.		6 00	
Services, Chas. H. Morse		10 00	
Stationery, printing and supplies:—			
Warren T. Billings	$7 00		
Cambridge Chronicle Company	14 50		
Carter's Ink Company	9 00		
Geo. H. Richter & Co.	6 45		
Stationery Department	16 11		
Sundry persons	6 10		
		59 16	
Sundries		5 55	
Telephone rent and tolls		172 00	
Use of horses and wagons:—			
Irving Blake	$39 00		
Ralph Smith & Co.	33 25		
Sundry persons	4 50		
		76 75	
Wagon repairs:—			
Chapman Carriage Company	$110 95		
Chas. Waugh & Co.	14 95		
		125 90	
Washing, Fannie E. Blaisdell		44 70	
Wiring, Cambridge Electric Light Company		55 05	
Total			11,197 60
Balance unexpended			$2 40

Interest.

Appropriation			$137,000 00
Transferred to Contingent Fund			1,000 00
			$136,000 00
RECEIVED.			
For accrued interest	$983 85		
Interest on deposits	4,248 02		
" " Sinking Funds	599 18		
" " sewer assessments	79 48		
" " sidewalk assessments	62 64		
" " taxes	6,100 13		
	$12,073 30		
EXPENDED.			
For Interest on			
Cemetery Fund		$22 32	
Daniel White Charity		300 00	
Dowse Institute Fund		600 00	
Funded Loan		124,630 00	
Sanders Temperance Fund		600 00	
Temporary Loans		9,642 86	
Total			$135,795 18
Balance unexpended			$204 82

Lamp Department.

Appropriation			$70,000 00
Transferred to Inspection of Wires			800 00
			$69,200 00
RECEIVED.			
For old lanterns, etc.	$30 23		
EXPENDED.			
For Salaries of			
Superintendent, Chas. F. Hopewell	$1,000 00		
Lamplighters	81 00		
		$1,081 00	
Carriage hire: —			
J. Callahan	$2 00		
J. E. Fabyan	14 00		
C. H. Lake	16 00		
Ralph Smith & Co.	8 00		
		40 00	
Carriage repairs, Chas. Waugh & Co.		84 44	
Dinners and lunches: —			
Chas. F. Hopewell	$ 85		
M. R. Jones	14 00		
		14 85	
Harness and repairs, Wm. H. Roberts		4 60	
Horse board: —			
H. L. Sanborn, Manager	$25 00		
Ralph Smith & Co.	275 00		
		300 00	
Horseshoeing, Wm. Balmer		20 00	
Lamp chimneys: —			
Burditt & Bynner	$1 00		
Norcross, Mellen & Co.	6 40		
		7 40	
Lighting streets: —			
Cambridge Electric Light Company: —			
Arc	$46,259 10		
Incandescent	13,340 42		
Cambridge Gas Light Company	68 70		
Town of Belmont	60 00		
Welsbach Street Lighting Company	7,645 51		
		67,373 73	
Moving lamps and wires: —			
Cambridge Electric Light Company	$67 10		
Cambridge Gas Light Company	81 16		
D. T. Johnstone	2 00		
		150 26	
Oil, Standard Oil Company		13 04	
Painting lamp-posts, Welsbach Street Lighting Company		33 88	
Stationery, printing and typewriter supplies: —			
Cotton & Gould	$12 75		
Lombard & Caustic	10 46		
Sundry persons	3 52		
		26 73	
Sundries		16 17	
Teaming, Thos. O'Hara		5 00	
Wiring, etc., Inspection of Wires		11 10	
Total			69,182 20
Balance unexpended			$17 80

Land Damages.

Appropriation			$30,420 75
EXPENDED.			
For Examination of titles: —			
Jabez A. Sawyer	$31 45		
Wm. V. Thompson	98 00		
		129 45	
Boylston Street, Land: —			
Dennis J. O'Brien	$3,550 00		
Henry C. Rand	330 20		
West End Street Railway Company	5,378 70		
		9,258 90	
Dunster Street, Land, West End Street Railway Company		2,451 00	
Eliot Street, Land, Henry C. Rand		2,028 00	
Huron Avenue, Land, Ann M. Boyle		31 50	
Magee Street, Land: —			
James Dunn	$68 48		
Dennis Halloran	144 02		
Major Walker, et al.	64 93		
Lewis W. West	135 13		
John Wilson	64 81		
		477 37	
Total			14,376 22
Balance unexpended			$16,044 53

Law Department.

Appropriation			$5,200 00
RECEIVED.			
For Costs in suit of James Dobins, Boston Elevated Railway Company	$58 30		
Services of City Solicitor	1,500 00		
	$1,558 30		
EXPENDED.			
For Salary of City Solicitor, G. A. A. Pevey		$3,500 00	
Advertising, Journal Newspaper Company		16 65	
Car tickets, Boston Elevated Railway Company		100 00	
Carriage hire: —			
Ralph Smith & Co.	$6 00		
Sundry persons	6 00		
		12 00	
Cash expended, G. A. A. Pevey		169 49	
Copies of papers and entry fees, Middlesex County		15 75	
Directory, E. F. Hunt & Co.		3 00	
Expert witnesses: —			
Thos. H. Brewer	$25 00		
Chas. H. Thurston	25 00		
		50 00	
Photographs, prints: —			
F. C. Garth	$115 00		
Chas. R. Leake, Jr.	15 00		
		130 00	
Plastering, Wm. J. Heron		17 75	
Rent of office, G. A. A. Pevey		208 34	
Retainer, Reuben A. Hill		25 00	
Amounts carried forward		$4,247 98	$5,200 00

Law Department — Concluded.

Amounts brought forward		$4,247 98	$5,200 00
For Services: —			
David T. Dickinson	$15 00		
Chas. E. Hadcock	25 00		
John B. Hall	5 00		
L. M. Hannum	40 00		
Chas. E. Holman	10 00		
Chas. Manser	5 94		
F. L. Putnam	5 00		
Dr. L. G. Walton	85 00		
Walter C. Wardwell	41 66		
Chas. F. Warner	10 00		
Sundry persons	11 28		
		253 88	
Stationery, typewriter supplies, legal papers: —			
T. H. Ball	$38 75		
Carter's Ink Company	9 00		
L. H. Lane	31 25		
Stationery Department	31 77		
Sundry persons	5 10		
		115 87	
Subscription, Banker and Tradesman		5 00	
Telephone tolls, New England Telephone Co.		40	
Typewriting and stenography: —			
Geo. B. French	$557 72		
Miss E. A. Hurlburt	4 00		
Saidee M. Swift	7 80		
		569 52	
Total			5,192 65
Balance unexpended			$7 35

Overseers of the Poor (Almshouse Department).

Appropriation			$21,000 00
RECEIVED.			
For Barrels	$31 20		
Board	1,038 19		
Grease and bones	88 87		
Rags	7 95		
Weighing fees	143 50		
Sundries	5 88		
	$1,315 59		
EXPENDED.			
For Salaries of			
Superintendent, M. L. Eldridge	$1,500 00		
Asst. Superintendent, Sam'l F. Norris	782 14		
Sundry house employees	4,699 58		
Organist, C. M. Walker	100 00		
		$7,081 72	
Advertising: —			
Boston Herald Company	$7 88		
Cambridge Chronicle Company	6 00		
		13 88	
Board, Cambridge Hospital		45 70	
Amounts carried forward		$7,141 30	$21,000 00

Overseers of the Poor (Almshouse Department) — Continued.

Amounts brought forward		$7,141 30	$21,000 00
For boots, shoes and repairs: —			
E. D. Eldridge	$12 15		
Jordan, Marsh & Co.	17 25		
Wm. Myers	27 65		
Parker Holmes & Co.	71 20		
J. P. Quinn	47 75		
A. G. Swett & Co.	71 40		
Sundry persons	3 80		
		251 20	
Burials, Horace D. Litchfield		40 90	
Burial fees, Cemetery Department		20 00	
Car tickets, Boston Elevated Railway Company		120 00	
Cash expended, M. L. Eldridge		286 79	
Clock repairs, Hersey Manufacturing Company		23 70	
Clothing, bedding, etc: —			
Brown, Durrell & Co.	$494 78		
Burton, Mansfield & Pierce	113 25		
Dyer, Rice & Co.	22 50		
Jordan, Marsh & Co.	626 66		
T. H. Lane & Co.	151 35		
L. Morse & Co.	86 67		
Oak Hall Clothing Company	94 50		
John O. Smith & Co.	171 50		
		1,761 21	
Directory, W. A. Greenough & Co.		3 00	
Disinfectants: —			
R. S. Downe	$5 00		
J. F. Fuller & Co.	12 00		
C. W. Lerned & Co.	10 72		
		27 72	
Expressage, Bancroft's Express		20 51	
Fuel: —			
Baker-Hunnewell Company	$106 86		
Clark Bros.	39 63		
Dennis, Thompson, Pierce Company	806 00		
Daniel McIntire	10 00		
Metropolitan Coal Company	175 60		
Weighing, H. W. Brooks	12 00		
		1,150 09	
Furniture, furnishings, household supplies: —			
G. W. Bent & Co.	$31 50		
Dover Stamping Company	26 69		
D. W. Gage	8 00		
Greenwood & Co.	34 57		
Jordan, Marsh & Co.	97 80		
Mitchell, Woodbury & Co.	16 70		
John H. Pray, Sons & Co.	59 59		
G. W. Sammett & Son	5 05		
Worcester Bros.	36 00		
		315 90	
Gas, Cambridge Gas Light Company		219 83	
Hardware, tools and supplies: —			
Burditt & Bynner	$65 38		
Amounts carried forward	$65 38	$11,382 15	$21,000 00

Overseers of the Poor (Almshouse Department) — Continued.

Amounts brought forward	$65 38	$11,382 15	$21,000 00
For Hardware, tools, and supplies:—			
Norcross, Mellen & Co.	6 55		
F. A. White	11 61		
Sundry persons	10 53		
		94 07	
Heating apparatus, repairs:—			
Walker & Pratt Manufacturing Co.	$18 75		
Sundry persons	8 90		
		27 65	
Horseshoeing, A. G. Swett & Co.		5 00	
House repairs:—			
Carpentry, W. H. Norris	$17 42		
Mason work, M. N. Stearns	20 50		
Plumbing, John H. Stevens & Co.	137 87		
Roof repairs, John J. Blevins	140 24		
		316 03	
Ice, Cambridge Ice Company		58 07	
Labor:—			
John Kenney	$10 00		
Michael Martin	139 97		
James Prendable	30 00		
Andrew Riley	6 00		
		185 97	
Lumber, lime, cement:—			
Clark Bros.	$7 25		
Geo. W. Gale Lumber Company	19 36		
Stratton Lumber Company	6 33		
Wm. H. Wood & Co.	12 70		
		45 64	
Medicines, drugs:—			
Gilman Bros.	$62 37		
Jas. W. Hunnewell	12 00		
Elie H. LaPierre	171 94		
Chas. S. Lombard	24 60		
Lombard & Tupper	13 01		
		283 92	
Newspapers, Jas. W. Hunnewell		12 00	
Oil, paints, etc.:—			
W. A. Wood & Co.	$14 84		
Wood Bros.	46 82		
		61 66	
Pipe, fittings, Walworth Manufacturing Company		41 18	
Plants, bulbs, seeds, Schlegel & Fottler		7 78	
Professional services:—			
J. L. Hildreth	$10 00		
Edmund H. Stevens	10 00		
		20 00	
Repairing wagons, Jas. A. Henderson & Son		9 15	
Rubber goods, electrical supplies, etc., C. S. Knowles		8 44	
Savogran, India Alkali Works		17 58	
Soap, Titer, Cook & Co.		60 75	
Spectacles, Globe Optical Co.		5 00	
Stationery, printing:—			
F. W. Barry, Beale & Co.	$5 15		
Cotton & Gould	21 50		
Sundries	5 37		
		32 02	
Amounts carried forward		$12,674 06	$21,000 00

Overseers of the Poor (Almshouse Department) — Concluded.

Amounts brought forward		$12,674 06	$21,000 00
For Subsistence supplies: —			
Austin & Graves	$8 54		
Boyd, Dalton & Co.	253 99		
Boyd, Leeds & Co.	477 40		
Cambridge Baking Co.	45 01		
Cheney, Upham & Co.	28 25		
Geo. H. Chessman & Co.	8 50		
Clark Bros.	31 00		
George Close	17 08		
Cobb, Bates & Yerxa	264 41		
A. W. Cutler & Co.	33 60		
Chas. L. Davenport	20 10		
L. M. Dolloff	314 02		
Eastern Salt Company	4 50		
R. S. Edwards & Co.	394 99		
David Ellis & Co.	209 29		
N. F. Goldsmith & Co.	6 25		
G. H. Hammond Co.	114 80		
J. A. Hathaway & Co.	1,716 38		
J. J. Hill	290 91		
J. A. Holmes & Co.	50 00		
Wm. H. Johnson	329 08		
Lyman L. Kimball & Co.	428 13		
A. J. Littlefield & Co.	317 20		
Isaac Locke & Co.	9 73		
A. J. Lovell & Co.	85 68		
McPherson Bros.	16 40		
Chas. E. Moody & Co.	39 43		
New York Biscuit Company	18 22		
National Biscuit Company	16 39		
Fred D. Norton	375 43		
Oakdale Manufacturing Company	225 00		
Geo. G. Parker	32 90		
A. G. Patch & Co.	111 54		
A. L. Proctor	42 36		
F. Putnam & Co.	108 60		
Geo. E. Richardson & Co.	24 50		
Sands, Taylor & Wood	464 50		
Fred'k C. Small & Co.	362 80		
Howard W. Spurr & Co.	224 23		
Swan, Newton & Co.	150 13		
Leonard A. Treat	18 40		
W. T. Warren	6 94		
David Whiting & Sons	127 60		
		7,824 21	
Sundries		26 59	
Tax on Almshouse land, City of Somerville		398 98	
Telephone rent and tolls		38 50	
Total			20,962 34
Balance unexpended			$37 66

Overseers of the Poor (Farm and Ledge).

Appropriation		$5,250 00
Add Surplus Revenue		1,200 00
		$6,450 00

RECEIVED.

For Farm produce	$5,730 13	
Stone	2,172 60	
	$7,902 73	

EXPENDED.

Farm Department.

For Labor on Farm:—			
Farmer, Jas. Welch	$782 50		
Employees	3,320 29		
		4,102	79
Boiler, etc., Walker & Pratt Manufacturing Co.		25	00
Boxes, J. A. Holmes & Co.		5	00
Cows:—			
W. H. Fairbank	$75 00		
F. W. Trelegan	110 00		
Wm. F. Ward	60 00		
		245	00
Hay, grain, lime, cement:—			
Clark Bros.	207 70		
S. C. Frost	27 80		
Geo. G. Wright	83 64		
		319	14
Hemp, lathyarn, M. F. Whiton & Co.		3	52
Killing hogs, Boston Packing and Provision Co.		5	00
Labor, John Kenney		110	00
Lumber, Geo. W. Gale Lumber Co.		8	00
Manure		157	87
Paint and putty, Wood Bros.		5	63
Plants and seeds:—			
Peter Henderson & Co.	4 14		
Schlegel & Fottler	135 36		
		139	50
Pigs, Daniel L. Tappan		30	00
Pullets, Wm. F. Ward		14	00
Printing, John H. Ford		4	87
Rent, Mercantile Wharf Corporation		40	00
Repairing carts, Breslin & Lohnes		86	80
Tools, hardware:—			
Jos. Breck & Sons	$9 32		
Burditt & Bynner	2 10		
C. S. Knowles.	34 50		
		45	92
Farm total		5,348	04

Ledge Department.

For Labor on Ledge:—			
Foreman, Michael Callahan	$190 00		
Employees	733 21		
		923	21
Fuel, Baker-Hunnewell Company		32	20
Grates, Geo. H. Sampson		5	49
Packing, C. S. Knowles			63
Ledge total		961	53
Total			6,309 57
Balance unexpended			$140 43

Overseers of the Poor (House Offal Department).

Appropriation			$26,000 00
RECEIVED.			
For sale of house offal	$7,264 09		
EXPENDED.			
For Labor as per pay-rolls		$20,930 50	
Butter tubs, New York Biscuit Co.		5 00	
Disinfectant: —			
C. W. Lerned & Co.	$31 20		
Sulpho-Naphthol Co.	12 50		
		43 70	
Harness and repairs, Jos. A. Ryan		137 62	
Hay, grain, straw, etc.: —			
Otis S. Brown & Co.	$522 55		
Clark Bros.	382 98		
C. F. & G. W. Eddy	170 15		
Leavitt, Sanborn & Co.	419 33		
E. R. Luke & Co.	42 83		
L. G. Stone & Co.	7 00		
Geo. G. Wright	897 00		
		2,441 84	
Horse, Welch & Hall		390 00	
Horse blankets, Sartwell, Heinhold & Humphrey		61 50	
Horseshoeing: —			
Wm. Bell	$342 55		
John McMahon & Co.	205 04		
		547 59	
Iron posts, C. White		35 00	
Labor, Hugh Toomey		120 00	
Lumber, cement: —			
John S. Clary	$54 73		
Geo. W. Gale Lumber Co.	174 39		
J. Sewell, Jr.	7 76		
		236 88	
Oil, grease, dressing: —			
John H. Fuller	$27 06		
Massachusetts Oil Company	18 60		
		45 66	
Paint, etc., Wood Bros.		69 70	
Sundries		18 02	
Tools, Dodge, Haley & Co.		37 07	
Wagon, A. W. Ganong		175 00	
Wagon repairs: —			
Breslin & Lohnes	$460 70		
A. S. Lohnes & Co.	115 60		
		576 30	
Total			25,871 38
Balance unexpended			$128 62

Overseers of the Poor (Outside Aid Department).

Appropriation			$46,500 00
Transferred from Contingent Fund			2,850 00
			$49,350 00
RECEIVED.			
For aid to, board and burial of sundry paupers		$6,591 02	
Amount carried forward			$49,350 00

Overseers of the Poor (Outside Aid Department) — Continued.

Amount brought forward			$49,350 00
	EXPENDED.		
For Salaries of			
Secretary, D. P. Muzzey	$1,500 00		
Visitor, V. Danforth	1,000 00		
Driver, John Moynahan	392 50		
Clerk, Addie M. Benson	550 00		
Visitor, Harold K. Estabrook	124 67		
		$3,567 17	
Aid to sundry persons, pay-roll		3,651 40	
By cities and towns: —			
City of Boston	$1,659 64		
Chelsea	3 00		
Everett	249 39		
Haverhill	88 75		
Lynn	3 25		
Malden	120 50		
Medford	75 66		
New Bedford	15 86		
Newburyport	40 64		
Somerville	604 80		
Waltham	10 03		
Worcester	12 70		
Town of Acton	70 18		
Arlington	17 50		
Athol	36 00		
Belmont	55 23		
Brookline	15 60		
Cohasset	255 10		
Douglas	15 50		
Hudson	75 45		
Hyde Park	8 00		
Peabody	73 33		
Raynham	130 50		
Rockland	15 00		
Saugus	12 00		
Shrewsbury	20 14		
		3,683 75	
Ambulance fees, Police Department		$120 00	
Binding: —			
E. W. Bettinson	$6 00		
J. H. H. McNamee	105 90		
		111 90	
Board and care at			
Mrs. Susannah Austin's	$28 57		
Boston Children's Aid Society	857 47		
Boston Lying-In Hospital	60 00		
Mrs. Ellen Butler's	28 86		
Cambridge Hospital	761 32		
Carney Hospital	466 84		
The Children's Hospital	22 00		
Clarke School for the Deaf	51 08		
Austin S. Corey's	6 50		
Danvers Lunatic Hospital	1,193 67		
Essex County Truant School	76 94		
Mrs. M. A. French's	146 00		
Hospital Cottages for Children	338 90		
Massachusetts General Hospital	66 00		
Amounts carried forward	$4,104 15	$11,134 22	$49,350 00

Overseers of the Poor (Outside Aid Department) — Continued.

Amounts brought forward	$4,104 15	$11,134 22	$49,350 00
For board and care at			
Massachusetts Hospital for Dipsomaniacs	677 44		
Massachusetts Hospital for Epileptics	309 21		
Massachusetts School for Feeble-Minded	1,556 28		
Medford Insane Asylum	6,110 24		
Mrs. V. B. Moody's	17 60		
New England Industrial School for Deaf Mutes	78 00		
Northampton Lunatic Hospital	169 46		
Mrs. Moses Pepper's	60 14		
Thos. F. Smith's	84 96		
Somerville Hospital	27 00		
St. Mary's Infant Asylum	6 00		
Mrs. G. H. Sweet's	169 46		
Taunton Lunatic Hospital	134 31		
Margaret Toner's	16 00		
Westboro Insane Hospital	2,703 02		
Worcester Insane Asylum	2,318 40		
Worcester Lunatic Hospital	7,847 30		
		26,388 97	
By Commonwealth of Massachusetts: —			
At Danvers Lunatic Hospital	$169 00		
Hospital for Dipsomaniacs	244 68		
State Almshouse	1,491 25		
State Farm	970 00		
Westboro Insane Hospital	244 68		
Worcester Lunatic Hospital	1,217 18		
		4,336 79	
Boots and shoes: —			
E. T. Fogg	$63 25		
W. H. Phelps & Co.	5 00		
W. T. Roop & Co.	13 50		
		81 75	
Burials: —			
City of Boston	$15 00		
Horace D. Litchfield	304 15		
		319 15	
Burial fees, Cemetery Department		190 00	
Car tickets: —			
Boston Elevated Railway Company	$300 00		
Boston and Maine Railroad Company	51 75		
		351 75	
Carpentry, W. H. Norris		64 75	
Carriage hire: —			
M. J. Fairbanks	$18 50		
Ralph Smith & Co.	37 00		
G. F. Whiting & Co.	14 50		
		70 00	
Cash expended: —			
Lewis L. Bryant (revenue stamps)	$2 50		
V. Danforth (traveling expenses)	35 04		
H. K. Estabrook (traveling expenses)	2 70		
D. P. Muzzey (sundries)	6 50		
		46 74	
Clothing, L. Morse & Co.		7 00	
Amounts carried forward		$42,991 12	$49,350 00

Overseers of the Poor (Outside Aid Department) — Continued.

Amounts brought forward		$42,991 12	$49,350 00
For Directories: —			
W. A. Greenough & Co.	$71 35		
L. Lemon	3 25		
Henry M. Meek	15 00		
Sampson, Murdock & Co.	5 00		
		$94 60	
Expressage and teaming		4 91	
Fuel: —			
Dennis, Thompson, Pierce Company	$133 75		
Metropolitan Coal Company	1,218 16		
H. Wellington & Co.	240 98		
Weighing, H. W. Brooks	13 25		
		1,606 14	
Ice, Fresh Pond Ice Company		29 50	
Lighting: —			
Cambridge Electric Light Company	$8 59		
Cambridge Gas Light Company	42 27		
		50 86	
Medicines, drugs: —			
A. R. Bayley & Co.	$7 56		
C. E. Coombs	11 56		
Wm. H. Frazier	8 69		
E. C. Gove	20 39		
Elie H. La Pierre	253 84		
Peake Manufacturing Company	5 60		
Reeves Bros.	7 29		
A. D. Reycroft	24 17		
L. W. Reycroft	51 76		
John Toye	5 70		
Sundry persons	13 65		
		410 21	
Medical instruments, surgical apparatus: —			
L. H. Buzzell & Vail	$5 60		
Codman & Shurtleff	4 00		
J. Frank Gear	11 15		
C. H. Goldthwaite & Co.	4 65		
W. H. Phelps & Co.	17 25		
		42 65	
Nurses: —			
Mrs. Mary E. Breslin	$45 00		
Mrs. Anna Carson	10 00		
Mrs. Sarah Jelley	10 00		
Mrs. Fannie Williams	16 43		
		81 43	
Paper bags etc., Wm. H. Claflin & Co.		26 01	
Painting, shellacing, Geo. H. Hughes		24 00	
Professional services: —			
Jas. A. Dow, M.D.	$5 00		
Paul F. Ela, M.D.	207 00		
S. S. Orr, M.D.	38 00		
N. V. Shannon, M.D.	10 00		
R. Wetherbee, M.D.	68 00		
		328 00	
Stamps and repairs, T. S. Buck		21 85	
Stationery, printing, typewriter supplies: —			
F. W. Barry, Beale & Co.	$64 65		
Amounts carried forward	$64 65	$45,711 28	$49,350 00

Overseers of the Poor (Outside Aid Department) — Concluded.

Amounts brought forward	$64 65	$45,711 28	$49,350 00
For stationery, printing, typewriter supplies:—			
Cotton & Gould	44 90		
John H. Ford	108 45		
Library Bureau	13 05		
Lombard & Caustic	74 23		
Geo. H. Richter & Co.	17 00		
Sundry persons	4 31		
		326 59	
Subsistence supplies:—			
Theodore E. Blake	$400 50		
Clark Bros.	44 20		
Daniel H. Dean	156 00		
R. S. Edwards & Co.	777 75		
J. A. Holmes & Co.	1,191 50		
H. N. Hovey & Co.	9 15		
McPherson Bros.	180 60		
Sands, Taylor & Wood	125 00		
Frederick C. Small & Co.	243 17		
Howard W. Spurr	79 26		
		3,207 13	
Sundries		19 61	
Telephone rent and tolls		75 90	
Total			49,340 51
Balance unexpended			$9 49

Overseers of the Poor (Salary of City Physician).

Appropriation			$1,500 00
EXPENDED.			
For salary of City Physician, Dr. L. L. Bryant		$1,500 00	
Total			1,500 00

Park Department (Construction).

Appropriation			$142,827 74
Additional appropriation			40,000 00
			$182,827 74
RECEIVED.			
For Gravel	$35 85		
Old building	27 00		
Overcharge for water pipe	72 98		
Rent	1,957 20		
Sand	62 70		
Stone	14 00		
Sundries	5 34		
	$2,175 07		
EXPENDED.			
For Cambridge Field:—			
Pay-rolls, laborers		$710 26	
Repairing and placing tents, Irving W. Wheeler & Co.		20 30	
Amounts carried forward		$730 56	$182,827 74

Park Department (Construction) — Continued.

Amounts brought forward		$730 56	$182,827 74
For Cambridge Field:—			
Stone, Mass. Broken Stone Company		32 63	
Teaming, Charles Linehan		6 75	
Total expenses, Cambridge Field		$769 94	
East Cambridge Embankment: —			
Filling, sundry persons		161 50	
Fuel, Coleman Bros.		6 00	
Hardware, tools and repairs		6 65	
Pay-rolls:—			
Laborers	$670 29		
Engineers	8 25		
		678 54	
Stone, Mass. Broken Stone Company		207 60	
Teaming		261 50	
Total expenses, East Cambridge Embankment		$1,321 79	
The Esplanade Extension (River Parkway, Section A):—			
Advertising, F. S. Hill		$2 00	
Ballast for sea wall, Thos. A. Rowe		10,590 76	
Building sea wall, Thos. A. Rowe		27,116 76	
Cash expended in Brown cases, G. A. Blaney		12 48	
Filling, New England Dredging Company		29,724 61	
Hardware and supplies, Burditt & Bynner		1 00	
Land, Frederick H. Rindge		1,300 00	
Leveling gravel ballast, New England Dredging Company		20 30	
Pay rolls:—			
Laborers	$71 50		
Engineers	433 30		
		504 80	
Rebate on water bill, Thos. A. Rowe		6 38	
Recording deeds		1 87	
Retainer, Fisk & Odiorne		200 00	
Total expenses, The Esplanade Extension		$69,480 96	
The Esplanade (River Parkway, Section B):—			
Base and grate, Concord Foundry Company		220 10	
Bricks, Parry Bros. & Co.		127 50	
Carpentry, W. H. Norris		15 93	
Filling, sundry persons		13,263 60	
Freight:—			
P. Biggin	$9 90		
Boston and Maine Railroad Company	10 00		
		19 90	
Fuel, Coleman Bros.		3 00	
Hardware, supplies, tools and repairs:—			
Jos. Breck & Sons	$41 63		
Burditt & Bynner	6 10		
J. A. Holmes & Co.	2 20		
Jas. Maitland	11 86		
		61 79	
Hose, Alex. S. Ford		3 69	
Amounts carried forward		$13,715 51	$182,827 74

Park Department (Construction) — Continued.

Amounts brought forward		$13,715 51	$182,827 74
For The Esplanade (River Parkway, Section B):—			
Lawn grass and seed:—			
Jos. Breck & Sons	$40 60		
R. & J. Farquhar	91 60		
		132 20	
Lumber:—			
E. D. Sawyer & Co.	$41 48		
Wm. H. Wood & Co.	77 99		
		119 47	
Pay-rolls:—			
Laborers	$11,608 46		
Engineers	744 34		
		12,352 80	
Pipe and cement:—			
D. W. Lewis	$194 56		
Portland Stone Ware Company	190 49		
		385 05	
Poles, Coleman Bros.		5 00	
Printing, Cambridge Chronicle Company		4 00	
Stone, Massachusetts Broken Stone Company		724 16	
Stone-edge, S. & R. J. Lombard		290 57	
Supply pipes, Water Works		518 32	
Teaming		3,975 07	
Trees:—			
T. C. Thurlow	$218 75		
W. H. Wyman	205 00		
		423 75	
Total expenses, The Esplanade		$32,645 90	
For General Account:—			
Salary of Gen. Supt. of Parks, Howard E. Whiting		$1,196 64	
Barge hire:—			
A. Nixon	$10 00		
John Nixon	18 00		
		28 00	
Bicycles:—			
J. L. Moseley	$75 00		
Jas. W. Pierce	24 00		
		99 00	
Bicycle Repairs, J. L. Moseley		6 25	
Binding reports, Cambridge Chronicle Company		75 08	
Car tickets, Boston Elevated Railway Co.		375 00	
Carriage hire:—			
C. H. Lake	$8 50		
G. F. Whiting & Co.	32 50		
		41 00	
Filling, sundry persons		230 26	
Hardware, tools and repairs:—			
Joseph Breck & Sons	$56 63		
Burditt & Bynner	29 36		
James Maitland	4 45		
Daniel J. Sullivan	6 45		
F. A. White	10 00		
		106 89	
Heliotypes, Heliotype Printing Co.		105 00	
Horse, G. F. Whiting & Co.		175 00	
Amounts carried forward		$2,438 12	$182,827 74

Park Department (Construction) — Continued.

Amounts brought forward		$2,438 12	$182,827 74
For Horse board and stable storage:—			
G. F. Whiting & Co.	$300 00		
Street Department	235 71		
		535 71	
Horseshoeing:—			
John F. Gurry & Sons	$1 00		
G. W. Lowd	19 00		
		20 00	
Hose, Burditt & Bynner		55 00	
Landscape architects, F. L. & J. C. Olmsted		854 04	
Lumber, E. D. Sawyer & Co.		21 21	
Lunch, M. R. Jones		63 50	
Pay-rolls:—			
Laborers	$450 39		
Engineers	46 87		
		497 26	
Photographs:—			
F. C. Garth	$100 00		
Chas. R. Leake, Jr.	7 40		
		107 40	
Photograph supplies, Horgan, Robey & Co.		16 27	
Plans, George Davis		91 00	
Plants and garden utensils:—			
R. and J. Farquhar & Co.	$86 80		
P. O'Brien & Son	65 00		
		151 80	
Railroad curves, Stowell Bros.		18 00	
Rent, The Prospect Union		120 00	
Repairing carriages:—			
Wm. Elliott & Co.	$2 60		
Chas. Waugh & Co.	7 05		
		9 65	
Rubber boots, W. T. Roop & Co.		25 20	
Services, Edwin B. Hale		175 00	
Services of veterinary, Geo. H. Lee		17 00	
Stakes, John Quin		41 00	
Stationery, printing and drawing materials:—			
Cambridge Chronicle Company	$132 35		
Frost & Adams Co.	21 94		
		154 29	
Sundries		14 07	
Teaming		69 00	
Use of horse, G. F. Whiting & Co.		55 50	
Wagon, F. Ivers & Son		98 00	
Total expenses, General Account		$5,648 02	
For Hastings Square:—			
Bricks, Parry Bros. & Co.		12 75	
Grates, traps, etc., Barbour-Stockwell Co.		20 30	
Gravel, M. O'Sullivan		127 04	
Pay-roll:—			
Laborers	$663 13		
Engineers	41 47		
		704 60	
Pipe and Cement:—			
D. W. Lewis	$15 42		
Sewer Department	4 15		
		19 57	
Amounts carried forward		$884 26	$182,827 74

Park Department (Construction) — Continued.

Amounts brought forward		$884 26	$182,827 74
For Hastings Square :—			
Posts, W. Fillmore & Co.		24 00	
Repairs, Water Works		17 35	
Teaming, Thos. O'Hara		18 00	
Total expenses, Hastings Square		$943 61	
For Nursery :—			
Pay-roll, laborers		$105 00	
Total expenses, Nursery		$105 00	
For Office expenses : —			
Salaries of clerks :—			
Grace E. Hixon	$626 00		
John R. Wilson	782 50		
		1,408 50	
Cash for traveling expenses, Chas. M. Jones		7 00	
Map, Geo. H. Walker & Co.		12 00	
Repairing chairs, A. Alexander		26 50	
Stationery, printing and typewriter supplies : —			
Cambridge Chronicle Company	107 40		
Cotton & Gould	46 10		
Stationery Department	70 76		
Sundry persons	9 45		
		233 71	
Telephone rent and tolls		182 43	
Total Office expenses		$1,870 14	
For Rindge Field : —			
Advertising, Cambridge Chronicle Company		$ 31	
Bricks, Parry Bros. & Co.		17 00	
Covers, rings and traps, Barbour-Stockwell Co.		34 60	
Filling : —			
Street Department	$326 70		
Sundry persons	1,223 63		
		1,550 33	
Pay-rolls :—			
Laborers	2,042 03		
Engineers	260 12		
		2,302 15	
Printing, Cambridge Chronicle Company		3 60	
Stakes, John Quin		17 50	
Teaming		681 16	
Total expenses, Rindge Field		$4,606 65	
For The River Parkway (Sections C, D, E, F, and G) :—			
Advertising : —			
Warren T. Billings	$9 50		
Cambridge Chronicle Company	3 62		
		13 12	
Appraising : —			
E. W. Boynton & Co.	$10 00		
W. Fillmore	15 00		
M. F. Tracy & Son	5 00		
		30 00	
Amounts carried forward		$43 12	$182,827 74

Park Department (Construction) — Continued.

Amounts brought forward		$43 12	$182,827 74
For The River Parkway (Sections C, D, E, F, and G):—			
Architect's services, Geo. A. Moore		125 00	
Bricks, Parry Bros. & Co.		10 63	
Brick sidewalk, Soule, Dillingham & Co.		1,902 33	
Carpentry and mill work:—			
W. Fillmore & Co.	$113 49		
J. H. Keenan Co.	9 50		
W. H. Norris	23 15		
		146 14	
Cutting granite, Alex. Wight		11 00	
Dredging, Bay State Dredging Company		908 85	
Fences:—			
A. Simpson, Agent	$154 15		
W. A. Snow & Co.	931 65		
		1,085 80	
Filling:—			
Bay State Dredging Company	$10,257 15		
Sundry persons	5,057 19		
		15,314 34	
Gravel and clay, Bay State Dredging Company		336 00	
Gutters and conductors, Howard F. Peak		68 00	
Hardware, tools and repairs, and supplies:—			
Jos. Breck & Son	$21 75		
Burditt & Bynner	22 66		
Wm. Elliott & Co.	3 45		
Miller & Shaw	19 42		
Whittier Hardware Co.	2 75		
		70 03	
Land, J. Russell Little		1,020 29	
Laying crossings, Simpson Bros.		54 60	
Lighting, Welsbach Street Lighting Company		443 91	
Lime, W. G. Nash		75 60	
Lumber:—			
E. D. Sawyer & Co.	$13 48		
Sewer Department	4 42		
Wm. H. Wood & Co.	58 23		
		76 13	
Moving boathouse, Herbert F. Miller		1,170 00	
Pay-rolls:—			
Laborers	$10,895 51		
Engineers	2,400 87		
		13,296 38	
Photographs, Whitney & Son		6 00	
Pipe and cement:—			
D. W. Lewis	$20 30		
Sewer Department	11 38		
		31 68	
Planking on boathouse, H. F. Miller		45 00	
Piles, John T. Scully		95 25	
Plants and trees, W. H. Wyman		92 85	
Printing, Cambridge Chronicle Company		15 03	
Repairs, Water Works		31 83	
Retainer, L. M. Hannum		125 00	
Rings, grates and traps, Barbour-Stockwell Co.		37 55	
Signs:—			
John H. Lamson	$10 00		
Lamson Sign Company	3 00		
		13 00	
Amounts carried forward		$36,651 34	$182,827 74

Park Department (Construction) — Continued.

Amounts brought forward		$36,651 34	$182,827 74
For The River Parkway (Sections C, D, E, F, and G) :—			
Spruce poles, Coleman Bros.		17 00	
Stakes, John Quin		17 50	
Stone :—			
S. & R. J. Lombard	$307 55		
Chas. McMahon	66 53		
		374 08	
Sundries		10 06	
Survey, estimate and plan of dyke, C. I. Pitman		10 00	
Teaming		512 49	
Use of pump, E. R. Cheney		12 00	
Use of steam roller, Barber-Asphalt Paving Co.		120 00	
Water rates, Water Works Department		6 00	
Water supply pipes, Water Works Department		8 69	
Total expenses, River Parkway		$37,739 16	
For Winthrop Square : —			
Pay-roll, laborers		$113 39	
Total expenses, Winthrop Square		$113 39	

SUMMARY : EXPENDED.

For Cambridge Field	$769 94	
East Cambridge Embankment	1,321 79	
Esplanade Extension.	69,480 96	
Esplanade	32,645 90	
General Account	5,648 02	
Hastings Square	943 61	
Nursery	105 00	
Office	1,870 14	
Rindge Field	4,606 65	
River Parkway	37,739 16	
Winthrop Square	113 39	
Total		$155,244 56
Balance unexpended		$27,583 18

Park Department (Maintenance).

Appropriation		$13,000 00

RECEIVED.

For labor	$166 41	

EXPENDED.

For Cambridge Field : —		
Hardware and supplies, Burditt & Bynner	$13 14	
Labor, Water Works	9 50	
Pay roll, laborers	2,066 77	
Repairing flag-staff, David Cass	15 75	
Sand, Ham & Carter Co.	26 25	
Sundries	5 60	
Teaming	70 61	
Amounts carried forward	$2,207 62	$13,000 00

Park Department (Maintenance) — Continued.

Amounts brought forward			$13,000 00
For Cambridge Field:—			
Varnish, shellac, etc:—			
J. L. Fiske & Co.		15 00	
Ralph P. Hoagland		5 60	
Total expenses, Cambridge Field		$2.228 22	
For Cambridge Field Shelter:—			
Superintendent, A. B. Griggs	$912 00		
Janitor, G. J. Weber	628 25		
Matron, Mrs. E. Reardon	521 67		
		2,061 92	
Hardware, tools and supplies:—			
Burditt & Bynner	$22 72		
Henry W. Goodwin	34 75		
J. A. Holmes & Co.	9 20		
Sundry persons	3 21		
		69 88	
Laundry work, E. and R. Laundry		25 17	
Lighting, Cambridge Electric Light Co.		202 97	
Plumbing, Isaac N. Tucker		50 25	
Polishing, J. L. P. Ackers		10 75	
Sundries		9 63	
Telephone, rent and tolls		130 60	
Total expenses, Cambridge Field Shelter		$2.561 17	
For Commons and Squares:—			
Hardware, tools and supplies:—			
Jos. Breck & Son	$78 25		
Burditt & Bynner	17 66		
Sundry persons	6 27		
		102 18	
Lumber, E. D. Sawyer & Co.		6 92	
Oil, Howe & French		5 24	
Pay-roll:—			
Laborers	$2,875 89		
Engineers	70 54		
		2,946 43	
Repairing fence, G. W. & F. Smith Iron Company		8 25	
Repairing flags, Fannie E. Blaisdell		13 50	
Sundries		2 05	
Teaming		119 64	
Work on flag-staffs, David Cass		49 36	
Total expenses, Commons and Squares		$3,253 57	
For General Account:—			
Bicycle repairs, J. L. Moseley		13 00	
Carriage and wagon repairs, F. Ivers & Son		10 50	
Harness and repairs, Hugh McCaffrey		14 85	
Horse board, G. F. Whiting & Co.		29 17	
Horseshoeing, G. W. Lowd		37 00	
Printing, Cambridge Chronicle Company		13 50	
Sundries		1 46	
Total expenses, General Account		$119 48	
Amounts carried forward			$13,000 00

Park Department (Maintenance) — Continued.

Amount brought forward			$13,000 00
For the Nursery :—			
Manure, David O'Mara		$38 09	
Pay-roll, laborers		540 00	
Poles, Coleman Bros.		167 79	
Total expenses, Nursery		$745 88	
For public grounds :—			
Filling, sundry persons		$68 90	
Paving, H. Gore & Co.		50 11	
Pay-rolls :—			
Laborers	$222 32		
Engineers	23 68		
		246 00	
Sundries		2 40	
Teaming		33 75	
Water supply, Water Works Department		43 64	
Total expenses, Public Grounds		$444 80	
For Rindge Field :—			
Pay-roll, laborers		$89 20	
Total expenses, Rindge Field		$89 20	
For Shade Trees :—			
Carpentry, W. Fillmore & Co.		15 00	
Filling, sundry persons		42 28	
Hardware, tools and supplies :—			
Joseph Breck & Sons	$292 90		
Burditt & Bynner	76 97		
		$369 87	
Pay-rolls :—			
Laborers	$2,981 08		
Engineers	3 88		
		2,984 96	
Printing, Cambridge Chronicle Company		12 00	
Repairing tools, Daniel J. Sullivan		6 30	
Spruce poles, Coleman Bros.		27 50	
Sundries		1 60	
Teaming		58 00	
Trees, Shady Hill Nursery		36 50	
Total expenses, Shade Trees		$3,557 01	

SUMMARY: EXPENDED.

For Cambridge Field	$2,228 22	
Cambridge Field Shelter	2,561 17	
Commons and Squares	3,253 57	
General Account	119 48	
Nursery	745 88	
Public Grounds	444 80	
Rindge Field	89 20	
Shade Trees	3,557 01	
Total		$12,999 33
Balance unexpended		67

Park Department (Maintenance, Interest).

Appropriation		$33,610 00
Transferred from Contingent Fund		960 00
		$34,570 00
EXPENDED.		
For Funded Loan	$34,570 00	
Total		$34,570 00

Park Department (Maintenance, Sinking Fund).

Appropriation		$14,375 00
EXPENDED.		
For amount required by City Ordinance for payment of Park debt		$14,375 00

Plumbers' Examiners' Department.

Appropriation		$120 00
RECEIVED.		
For licenses	$35 00	
EXPENDED.		
For Clerical services, H. M. Griffin	15 00	
Examinations, John Crawford	96 50	
Total		$111 50
Balance unexpended		$8 50

Police Department.

Appropriation			$117,000 00
RECEIVED.			
For Ambulance fees		$135 00	
Cloth		573 94	
Fines:—			
J. R. Fairbairn, House of Correction	$1,598 00		
E. W. Law, Third District Court	3,645 07		
		5,243 07	
Horse		40 00	
Minors' licenses		90 75	
		$6,082 76	
EXPENDED.			
For salaries of			
Chief, L. J. Cloyes	$1,800 00		
Deputy Chief, W. F. Batchelder	1,500 00		
Captains:—			
M. J. Folsom	1,399 92		
J. F. Murray	1,399 92		
F. B. Pullen	1,399 92		
Inspector J. E. Murray	1,399 92		
Sergeants	8,027 50		
Patrolmen	86,297 90		
Drivers	4,828 26		
Amounts carried forward	$108,053 34		$117,000 00

Police Department — Continued.

Amounts brought forward	$108,053 34		$117,000 00
For salaries of			
Matrons	730 00		
Lieutenant, Henry C. Jones	996 87		
		109,780 21	
Badges, Raphael Masstrangialo		21 25	
Belts, H. A. Winship		18 00	
Bicycle repairs, J. L. Moseley		12 00	
Binding, J. H. H. McNamee		76 00	
Buttons, D. Evans & Co.		74 17	
Car tickets, Boston Elevated Railway Co.		250 00	
Carpentry :—			
W. H. Norris	$40 58		
John Quin	16 81		
		57 39	
Cash expended for sundries : —			
L. J. Cloyes	$8 41		
M. J. Folsom	17 34		
J. E. Murray	40 35		
J. F. Murray	30 87		
F. B. Pullen	24 17		
Sundry persons	2 40		
		123 54	
Chevrons, Mrs. J. E. Marshall		9 20	
Cleaning carpets, Geo. F. Ricker		5 41	
Cleaning Stations : —			
Julia Delaney	$15 75		
Mary Freeman	30 00		
Mary McEachern	96 00		
Anna Wright	90 00		
		231 75	
Cloth for uniforms, Wendell, Fay & Co.		527 77	
Directories, E. F. Hunt & Co.		18 00	
Electrical work and supplies :—			
F. Bryant & Co.	$36 07		
Electric Gas Light Company	7 00		
Pettingell, Andrews Co.	6 79		
		49 86	
Firearms and repairs, Wm. Read & Sons		31 57	
Furniture and repairs :—			
James Grant	$12 50		
Phillips Bros. & Co.	19 00		
		31 50	
Fuel : —			
Dennis, Thompson, Pierce Co.	$160 75		
L. G. Burnham & Co.	131 50		
		292 25	
Hardware and supplies : —			
Brock & Eaton	$5 40		
Burditt & Bynner	79 53		
Sundry persons	4 50		
		89 43	
Harness and repairs, etc :—			
Charles E. Berry	$7 50		
Owen Doherty	21 20		
James Forgie and Son	5 00		
William H. Roberts	11 05		
Charles Waugh & Co.	44 85		
Sundry persons	1 85	91 45	
Amounts carried forward		$111,790 75	$117,000 00

Police Department — Continued.

Amounts brought forward		$111,790 75	$117,000 00
For Hay, grain, etc.:—			
J. S. Bradeen	$88 18		
A. G. Dore & Co.	370 34		
		458 52	
Heating apparatus repairs:—			
Greene & Co.	$72 09		
Edward Kendall & Sons	73 18		
		145 27	
Heating office, etc., City Buildings Department		890 00	
Horses:—			
Alexander Blackburn	$150 00		
G. F. Whiting & Co.	150 00		
		$300 00	
Horse board, G. F. Whiting & Co.		300 00	
Horse clipping, Ferris & Co.		5 00	
Horse clothing, L. C. Chase & Co.		5 00	
Horseshoeing:—			
William Balmer	$43 50		
T. Burke	22 75		
P. J. Callahan	12 00		
William Ferguson	13 50		
W. F. Garrett	7 13		
G. W. Lowd	21 00		
Thomas Smith	21 00		
		140 88	
Horse hire, Ralph Smith & Co.		21 00	
Ice:—			
Boston Ice Co.	$14 80		
Fresh Pond Ice Co.	29 95		
		44 75	
Laundry work, W. H. Dow		21 99	
Lights:—			
Cambridge Electric Light Company	$110 29		
Cambridge Gas Light Company	782 92		
		893 21	
Medicines, drugs, etc.:—			
A. D. Reycroft	$5 40		
Sundry persons	2 05		
		7 45	
Photographs:—			
Fred M. Ellis	$9 00		
Chas. R. Leake, Jr.	8 00		
Sundry persons	7 50		
		24 50	
Plastering, Wm. J. Heron		14 80	
Plumbing, John J. Long		10 75	
Professional attendance:—			
P. M. Fitzsimmons	$17 00		
Sundry persons	17 00		
		34 00	
Painting, glazing, etc.:—			
Geo. H. Hughes	$202 50		
Sundry persons	3 75		
		206 25	
Stationery, printing and typewriter supplies:—			
Cambridge Chronicle Company	$105 73		
Caustic & Claflin	19 50		
Cotton & Gould	190 19		
Amounts carried forward	$315 42	$115,314 12	$117,000 00

Police Department — Continued.

Amounts brought forward	$315 42	$115,314 12	$117,000 00
For stationery, printing and typewriter supplies:—			
Lombard & Caustic	71 51		
Stationery Department	61 29		
Sundry persons	5 50		
		453 72	
Sundries		51 14	
Sundry supplies: —			
D. W. Hyde & Co.	$8 27		
M. R. Jouett & Co.	7 88		
J. C. Moor	15 81		
Jas. H. Wyeth & Co.	5 59		
Sundry persons	17 55		
		55 10	
Telephone rent and tolls		583 88	
Use of ambulance, Chas. Waugh & Co.		22 50	
Use of pung, Chas. Waugh & Co.		8 00	
Wagon repairs, Chas. Waugh & Co.		253 95	
Wreaths and numbers, Raphael Masstrangialo		20 18	
Total			$116,762 59
Balance unexpended			$237 41

Public Library Department.

Appropriation			$19,000 00
RECEIVED.			
For Dog licenses, 1897		$4,303 10	
Fines and catalogues		561 58	
		$4,864 68	
EXPENDED.			
For Salaries of			
Librarian, Wm. L. R. Gifford	$2,466 66		
Assistants	4,910 18		
Janitor, T. M. Thomas	1,173 22		
Janitor's substitute	20 00		
		8,570 06	
Atlas, H. E. Hooper		15 00	
Baskets, Hopkinson & Holden		7 50	
Binding and binders: —			
E. W. Bettinson	$61 74		
Boston Bookbinding Company	64 00		
David Farquhar	4 80		
J. H. H. McNamee	1,070 35		
Geo. H. Richter & Co.	9 00		
		1,209 89	
Books, periodicals, etc: —			
Amee Bros.	$578 78		
Balch Bros.	29 00		
Boston Book Company	25 70		
N. R. Campbell & Co.	37 75		
T. W. Castor & Co.	111 88		
W. B. Clarke & Co.	38 81		
Cleveland Public Library	5 00		
Cyclopædia Publishing Company	7 00		
Essex Institute	6 00		
Amounts carried forward	$839 92	$9,802 45	$19,000 00

Public Library Department — Continued.

Amounts brought forward	$839 92	$9,802 45	$19,000 00
For Books, periodicals, etc.:—			
Estes & Lauriat	12 50		
David Farquhar	30 82		
Fishes of N. America Publishing Co.	9 00		
Harper's Weekly Club	19 00		
Houghton, Mifflin & Co.	6 00		
Land of Sunshine Publishing Company	7 60		
Chas. E. Lauriat Co.	7 50		
Little, Brown & Co.	3,429 77		
Geo. E. Littlefield	326 02		
G. P. Putnam's Sons	5 00		
Geo. W. Rolfe	10 00		
Chas. Scribner's Sons	6 00		
Sundry persons	10 55		
		4,719 68	
Car tickets, Boston Elevated Railway Co.		20 00	
Carpentry and mill work:—			
John Quin	$18 19		
M. F. Tracy & Son	6 08		
		24 27	
Cash for sundries, W. L. R. Gifford		7 00	
Delivery of books and agencies:—			
Wm. B. Cade	$534 86		
M. I. Dow	47 50		
E. C. Gove	47 50		
H. M. Grant	35 00		
Jas. W. Hunnewell	95 83		
Carrie Ellsworth Phillips	50 00		
Michael Whalen	58 33		
		869 02	
Directories and Gazetteer:—			
W. A. Greenough & Co.	$9 00		
Sampson, Murdock & Co.	11 00		
		20 00	
Examining and repairing boilers, Roberts Iron Works Co.		122 98	
Expressage, Sawin's express		42 45	
Frames, J. F. Olsson & Co.		20 50	
Fuel:—			
L. G. Burnham & Co.	$236 70		
Dennis, Thompson, Pierce Co.	192 88		
Weighing, H. W. Brooks	2 25		
		431 83	
Furniture and furnishings:—			
Library bureau	12 00		
Thos. O'Callaghan & Co.	23 00		
H. E. Russell & Co.	7 00		
Worcester Bros.	21 88		
		63 88	
Furniture repairs, Irving & Casson		25 00	
Hardware and supplies:—			
Brock & Eaton	$59 49		
Sundry persons	1 19		
		60 68	
Ice, Fresh Pond Ice Co.		17 80	
Insurance, R. B. Walker		180 00	
Laundry, T. M. Thomas		10 23	
Amounts carried forward		$16,437 77	$19,000 00

Public Library Department — Concluded.

Amounts brought forward		$16,437 77	$19,000 00
For Lighting :—			
Cambridge Electric Light Co.	$653 21		
Cambridge Gas Light Co.	369 39		
		1,022 60	
Mantels, chimneys, burners, lamps, etc. :—			
Bernstein Electric Co.	$42 00		
Boston Gas Appliance Exchange	24 00		
W. E. Chipman	10 20		
Dwight T. Cortis	66 90		
C. H. McKenney & Co.	7 80		
		150 90	
Maps :—			
J. A. Cline	$ 7 75		
Geo. H. Walker & Co.	10 00		
		17 75	
Painting, J. L. P. Ackers		118 90	
Plumbing :—			
Samuel McCulloch	$13 95		
H. L. Rose	8 20		
		22 15	
Rent, The Prospect Union		60 00	
Rindge Album, D. W. Butterfield		25 00	
Roof repairs, Wm. Gordon		17 23	
Safe, Damon Safe and Iron Works		75 00	
Soap, Frank P. Merrill		6 71	
Soaposo, Standard Chemical Co.		9 42	
Stamps and pads, H. C. Dimond & Co.		5 76	
Stationery, printing, etc. :—			
Amee Bros.	$17 85		
Boston Bank Note Co.	10 00		
Oliver B. Graves	363 19		
Hooper, Lewis & Co.	78 30		
Library Bureau	71 50		
Lombard & Caustic	21 29		
Samuel Ward Co.	10 55		
Stationery Department	59 05		
E. W. Wheeler	273 00		
Sundry persons	7 20		
		911 93	
Sundries		15 66	
Telephone, rent and tolls		90 90	
Typewriter repairs :—			
Hammond Typewriter Co.	$6 10		
United Typewriter & Supply Co.	5 80		
		11 90	
Total			18,999 58
Balance unexpended			$ 42

Public Library (East Cambridge Branch).

Appropriation			$1,080 00
EXPENDED.			
For Salaries of			
Superintendent, John J. Henderson	$541 66		
Assistant, C. S. Marsh	156 50		
Substitute, Jeremiah J. Boyle	22 50		
		$720 66	
Amounts carried forward		$720 66	$1,080 00

Public Library (East Cambridge Branch) — Concluded.

Amounts brought forward	$720 66	$1,080 00
For Binding, David Farquhar	16 56	
Books and periodicals, Amee Bros.	101 65	
Lighting, Cambridge Gas Light Company	29 68	
Rent, Robinson Estate	200 00	
Sundries	10 25	
Total		1,078 80
Balance unexpended		$1 20

Public Property (City Buildings, Care and Repairs).

Appropriation			$22,000 00
RECEIVED.			
For Heating buildings:—			
Fire Department	$375 00		
Inspection of Wires	100 00		
Police Department	890 00		
		1,365 00	
Oak screen		7 00	
Rents:—			
Armories	$1,504 00		
Old Bridge schoolhouse	50 00		
Third District Court rooms	450 00		
Water Works office, shop, etc.	2,000 00		
		4,004 00	
Rent of land:—			
Wm. Hanlon	$229 13		
Jas. S. McMahon	44 00		
		273 13	
Sale of building, Winsor and Harvard Streets		35 00	
		$5,684 13	
EXPENDED.			
For Salaries of janitors		$10,697 90	
Dues, Gas Consumers' Association		44 00	
Fuel:—			
L. G. Burnham & Co.	$1,199 70		
Dennis, Thompson, Pierce Co.	1,140 41		
P. F. Gayton	22 00		
Metropolitan Coal Co.	32 00		
H. Wellington & Co.	8 00		
Wellington-Wild Coal Co.	11 00		
Weighing, H. W. Brooks	27 15		
		2,440 26	
Inspecting boilers, Everett B. Dyer, State Boiler Inspector		14 50	
Lights:—			
Cambridge Electric Light Company	$1,258 70		
Cambridge Gas Light Company	785 90		
		2,044 60	
Sundries		8 00	
Use of chairs, Pettingell & Pear		8 00	
Alterations and repairs:—			
Altering combination, Smith & Lovett		4 00	
Carpentry:—			
Colin Chisholm	$315 17		
Amounts carried forward	$315 17	$15,261 26	$22,000 00

Public Property (City Buildings, Care and Repairs) — Continued.

Amounts brought forward	$315 17	$15,261 26	$22,000 00
For alterations and repairs:—			
Carpentry:—			
W. H. Norris	2,190 33		
John Quin	50 05		
I. B. Rice	15 49		
M. F. Tracey & Son	8 13		
		2,579 17	
Clock repairs:—			
A. J. Applegate Co.	$4 00		
The E. Howard Watch Co.	4 20		
T. M. Kenney	5 00		
Geo. M. Stevens	12 06		
		25 26	
Electrical work, Inspection of Wires Department		25 70	
Elevator repairs, Whittier Machine Co.		14 23	
Flag repairs, F. E. Blaisdell		6 00	
Furniture repairs:—			
A. Alexander	$62 25		
F. M. Eaton	5 30		
Worcester Bros.	2 25		
		69 80	
Heating and ventilating apparatus repairs:—			
Evans, Almirall & Co.	$6 10		
Greene & Co.	464 51		
W. Haley	16 39		
S. C. Higgins	8 91		
Locke Regulator Co.	4 00		
Rawson & Morrison	16 40		
Roberts Iron Works Co.	274 50		
B. F. Sturtevant Co.	4 95		
D. J. Wild & Co.	81 00		
		876 76	
Mason work:—			
John B. Byrne	$24 83		
Henry McGahey	71 93		
M. N. Stearns	52 41		
		149 17	
Painting and glazing:—			
J. L. P. Ackers	$397 61		
C. E. Cochrane	65 00		
W. J. Edwards	23 90		
Geo. H. Hughes	1 50		
Chas. A. Sawyer	509 85		
		997 86	
Plastering, Wm. J. Heron		82 95	
Plumbing:—			
Arthur W. Balcom	$3 60		
Brock Bros.	11 91		
Brock & Eaton	25 35		
E. W. Clark	36 82		
Greene & Co.	4 70		
Levi Hawkes	17 82		
H. L. Rose	363 21		
		463 41	
Pump repairs, Geo. F. Blake Manufacturing Co.		11 15	
Roof repairs:—			
John J. Blevins	$215 00		
Howard F. Peak	23 12	238 12	
Amounts carried forward		$20,800 84	$22,000 00

Public Property (City Buildings, Care and Repairs) — Concluded.

Amounts brought forward		$20,800 84	$22,000 00
For Supplies: —			
Electrical supplies and apparatus: —			
F. Bryant & Co.	$24 59		
Gilmore Electric Company	20 40		
General Electric Company	82 50		
Pettingell, Andrews Company	18 78		
Sundry persons	6 05		
		152 32	
Fence at Shooting Range, A. Simpson, Agent		143 00	
Furniture and furnishings: —			
Jas. A. Furfey	$2 15		
J. A. Kennedy	14 00		
Phillips Bros.	48 00		
Worcester Bros.	7 73		
		71 88	
Hardware, tools and supplies: —			
Burditt & Bynner	$88 52		
M. D. Chambers	12 00		
F. E. Fitts Manuf'g and Supply Co.	8 38		
C. W. H. Moulton & Co.	10 75		
J. F. Pennell	5 05		
Phipps Bros.	6 25		
Isaac Sexton & Co.	15 00		
F. A. White	8 44		
Whitney & Snow	80 54		
Sundry persons	8 04		
		242 97	
Ice, Fresh Pond Ice Co.		59 00	
Oil and engine supplies: —			
Fred. A. Keniston Engineering Co.	$256 50		
Lubron Packing Co.	16 31		
W. A. Morrison	6 82		
		279 63	
Soap and soda: —			
J. A. Holmes & Co.	$5 00		
Hoxie Mineral Soap Corporation	4 50		
Chas. R. Teele	6 00		
		15 50	
Sundry supplies: —			
Daniel H. Dean	$11 25		
Diamond Match Co.	5 25		
D. W. Hyde & Co.	22 84		
Chas. Munroe	16 75		
		56 09	
Total			21,821 23
Balance unexpended			$178 77

SUMMARY: EXPENDED.

For Salaries of Janitors	$10,697 90
Fuel	2,440 26
Lights	2,088 60
Alterations and repairs	5,558 08
Supplies	1,036 39
Total	$21,821 23

Public Property (Incidentals).

Appropriation			$5,500 00
EXPENDED.			
For salaries of			
Supt. of Buildings, Wm. H. Gray	$2,000 00		
Inspectors:—			
J. W. Emery	1,000 00		
C. H. M. Hunnewell	1,000 00		
Clerk, Lillian W. Hyde	313 00		
		$4,313 00	
Bicycle, J. L. Moseley		100 00	
Bicycle repairs and supplies, J. L. Moseley		26 60	
Care and repair of tower clocks:—			
Chas. H. Chandler, Treasurer	$26 00		
A. K. Jones	52 00		
J. B. Mace	26 00		
H. S. Woodworth	32 00		
Sundries	4 30		
		140 30	
Carriage hire:—			
Irving Blake	$14 00		
Chas. W. Dailey	14 00		
J. E. Fabyan	7 00		
		35 00	
Car tickets, Boston Elevated Railway Co.		160 00	
Dinners:—			
S. F. Gates & Co.	$12 25		
M. R. Jones	28 00		
Wm. H. Waterfall	14 50		
		54 75	
Harness repairs, etc., Chas. W. Dailey		10 15	
Horse board, Chas. W. Dailey		264 00	
Horseshoeing:—			
Wm. Balmer	$23 00		
Chas. W. Dailey	7 13		
		30 13	
Repairing carriages, Richard Tyner & Son		56 88	
Stationery, printing, etc.:—			
Cambridge Chronicle Company	$84 70		
Cotton & Gould	52 43		
Frost & Adams Company	6 79		
Lombard & Caustic	11 46		
Stationery Department	26 00		
		181 38	
Sundries		14 50	
Telephone rent and tolls		88 52	
Typewriting, Lillian W. Hyde		9 60	
Total			5,484 81
Balance unexpended			$15 19

Public Property (New School House, Ward Two).

Appropriation			$60,000 00
Additional appropriation			2,000 00
			62,000 00
EXPENDED.			
For advertising and printing, Cambridge Chronicle Co.		$7 10	
Architect's services, Geo. A. Moore		993 32	
Amounts carried forward		$1,000 42	$62,000 00

Public Property (New School House, Ward Two) — Concluded.

Amounts brought forward		$1,000 42	$62,000 00
For Building contract, Lord Bros.		15,956 25	
Examination of title, Wm. V. Thompson		40 00	
Fence, E. W. Boynton & Co.		7 43	
Labor, as per pay-roll		2 00	
Land, Geo. H. Rugg, Tr.		12,000 00	
Soundings, B. F. Smith & Bro.		70 00	
Typewriting, Lillian W. Hyde		7 50	
Total			29,083 60
Balance unexpended			$32,916 40

Public Property (New School House, Ward Five).

Appropriation			$50,000 00
EXPENDED.			
For advertising and printing, Cambridge Chronicle Co.		$2 07	
Architect's services, Aaron H. Gould		1,200 00	
Building contract, F. G. Coburn & Co.		27,555 00	
Labor, as per pay-roll		11 38	
Rods, etc., Boston Bolt Company		11 75	
Total			$28,780 20
Balance unexpended			$21,219 80

Public Property (New Latin School House).

Appropriation			$148,606 38
EXPENDED.			
For Advertising, Cambridge Chronicle Company		$1 65	
Contracts: —			
Building, John S. Jacobs & Son	$61,394 19		
Electrical work, Clark & Mills	2,272 57		
Heating and ventilating, Lynch & Woodward	13,116 00		
Plans, Hartwell, Richardson & Driver	3,500 00		
Services of clerk	1,320 00		
Plumbing, Pierce & Cox	6,891 75		
		88,494 51	
Frames, Wm. J. Heron		388 00	
Printing, Cambridge Chronicle Company		53 00	
Total			$88,937 16
Balance unexpended			$59,669 22

Public Property (Addition to Peabody School).

Appropriation			$40,000 00
Additional appropriation			2,000 00
			$42,000 00
EXPENDED.			
For advertising and printing, Cambridge Chronicle Co.		$4 01	
Building contract, Henry McGahey.		23,562 75	
Plans, etc., George Fogerty		975 00	
Total			$24,541 76
Balance unexpended			$17,458 24

Public Property (Shooting Range).

Appropriation			$200 00
EXPENDED.			
For labor at shooting range, Patrick Duggan		$51 00	
Total			51 00
Balance unexpended			$149 00

Public Property (School Houses, Care and Repairs).

Appropriation			$60,000 00
EXPENDED.			
For Salaries of janitors		$25,218 56	
Services of engineers and pavers		301 65	
Examination of boilers, Roberts Iron Works		8 20	
Expressage and moving furniture:—			
P. Biggin	$68 00		
Sundry persons	3 95		
		71 95	
Fuel:—			
L. G. Burnham & Co.	$1,511 66		
Dennis, Thompson, Pierce Co.	10,170 32		
P. F. Gayton & Co.	220 22		
Metropolitan Coal Co.	119 43		
H. Wellington & Co.	86 63		
Wellington-Wild Coal Company	19 25		
Weighing, H. W. Brooks	128 70		
		12,256 21	
Horse and wagon hire, John R. Kenney		7 50	
Inspecting boilers, Everett B. Dyer, State Inspector		27 50	
Lights:—			
Cambridge Electric Light Company	$808 32		
Cambridge Gas Light Company	1,309 24		
		2,117 56	
Rent:—			
Alexander Dickinson	$299 00		
J. F. O'Brien	500 00		
		799 00	
Sundries		12 51	
Teaming, sundry persons		291 23	
Repairs and alterations:—			
Blackboards, American Blackboard Co.	$347 92		
J. L. Hammett Co.	35 57		
		383 49	
Carpentry:—			
M. C. Beedle	$157 43		
E. W. Boynton & Co.	10 84		
Bunker & Allcock	38 20		
Chas. H. Callahan	25 78		
D. K. Dinsmore	27 16		
O. B. French	181 93		
I. W. Gillespie	15 25		
W. H. Norris	2,589 04		
Patterson & Fox	12 26		
John Quin	541 34		
Wm. H. Ramsdell	94 52		
Amounts carried forward	$3,693 75	$41,495 36	$60,000 00

Public Property (School Houses, Care and Repairs)—Continued.

Amounts brought forward		$3,693 75	$41,495 36	$60,000 00
For Carpentry:—				
I. B. Rice	6 60			
R. & C. G. Wentworth	30 16			
			3,730 51	
Clock repairs:—				
A. J. Applegate Company	$23 75			
Simon Flaig	5 00			
T. M. Kenney	24 50			
Jas. A. Rice	6 00			
Sundry persons	10 75			
			70 00	
Edgestone, Austin Ford & Son			91 58	
Electrical work:—				
Inspection of wires	$30 77			
Sundry persons	6 75			
			37 52	
Fences, A. Simpson			504 00	
Furniture and furnishings repairs:—				
F. M. Eaton	$35 25			
Jos. Hartshorn	6 50			
T. B. Wentworth	39 59			
W. C. Westman	151 56			
Sundry persons	1 85			
			234 69	
Heating and ventilating apparatus repairs:—				
Brock Bros.	$133 74			
Wm. Campbell & Co.	192 37			
Wm. Fitzgerald	150 93			
Greene & Co.	849 38			
W. Haley	26 56			
S. C. Higgins	364 18			
Edw. Kendall & Sons	144 35			
John J. Long	161 10			
Chas. Moore & Son	146 57			
E. Morris	7 00			
Moynahan & Co.	290 32			
J. F. Pennell	186 38			
Albert H. Ricker	53 00			
G. L. Stewart	270 45			
D. J. Wild & Co.	108 95			
			3,085 28	
Lighting apparatus repairs:—				
Geo. F. Dickson	$2 50			
John J. Long	18 49			
			20 99	
Mason work:—				
John B. Byrne	$272 64			
Wm. Crane	7 30			
Henry McGahey	254 73			
M. N. Stearns	44 95			
			579 62	
Painting and glazing:—				
American Luxfer Prism Co.	$106 91			
J. L. P. Ackers	1,161 56			
L. Bresnahan	6 50			
T. H. Donlan	5 15			
Amounts carried forward		$1,280 12	$49,849 55	$60,000 00

Public Property (School Houses, Care and Repairs) — Continued.

Amounts brought forward	$1,280 12	$49,849 55	$60,000 00
For painting and glazing:—			
M. A. Feeley	494 73		
J. D. Ford	50 34		
J. B. Higgins	5 50		
M. F. Marks	12 70		
Chas. A. Sawyer	192 84		
J. J. Shedd	419 14		
Woods Bros. & Co.	539 65		
Sundry persons	7 05		
		3,002 07	
Paving, H. T. Soper		29 25	
Plastering:—			
Wm. J. Heron	$363 93		
Ganet H. Lambert	12 25		
		376 18	
Plumbing:—			
Brock & Eaton	$38 50		
Ernest W. Clark	105 26		
Ford Bros.	2 30		
Fuller & Warren Co.	10 90		
W. Haley	177 06		
Levi Hawkes	6 37		
John J. Long	80 77		
Chas. Moore & Son	32 53		
Moynahan & Co.	81 64		
Albert H. Ricker	169 70		
H. L. Rose	369 40		
W. H. Sweeney	43 29		
D. J. Wild & Co.	46 40		
		1,164 12	
Roof and conductor repairs:—			
John J. Blevins	$945 46		
J. F. Pennell	7 50		
		952 96	
Supplies:—			
Ash barrels, etc., Isaac Sexton & Co.		62 50	
Bricks:—			
Parry Bros. & Co.	$13 60		
M. W. Sands	150 00		
		163 60	
Clocks, T. M. Kenney		150 00	
Disinfectants:—			
C. W. Lerned & Co.	$75 00		
Sulpho-Naphthol Co.	48 00		
		123 00	
Dusters, brooms, brushes, etc.:—			
Burditt & Bynner	$36 00		
A. and E. Burton & Co.	142 20		
F. M. Eaton	20 00		
Chas. E. Stevens	9 00		
G. H. Worcester & Co.	42 20		
		249 40	
Electrotype, Cambridge Chronicle Company		5 96	
Furniture and furnishings:—			
American Blackboard Company	$106 48		
Burditt & Bynner	60 96		
Chandler Adjustable Chair & Desk Co.	1,254 80		
County of Middlesex	5 25		
Amounts carried forward	$1,427 49	$56,128 59	$60,000 00

Public Property (School Houses, Care and Repairs) — Concluded.

Amounts brought forward	$1,427 49	$56,128 59	$60,000 00
For furniture and furnishings:—			
P. Derby & Co.	29 00		
Jas. A. Furfey	72 96		
Joel Goldthwait & Co.	89 87		
J. L. Hammett Co.	164 16		
Jos. W. Hartshorn Co.	46 80		
Heywood Bros. and Wakefield Co.	75 68		
Jordan, Marsh & Co.	14 00		
John H. Kelsey	11 00		
J. A. Kennedy	130 00		
Geo. S. Perry & Co.	136 24		
W. W. Pratt	66 40		
Rourke & Kennedy	251 90		
Geo. W. Smith	63 60		
John M. Woods, assignee	125 00		
		2,704 10	
Hardware, tools and supplies:—			
Burditt & Bynner	$144 30		
Dover Stamping Co.	13 50		
Fred. A. Keniston Engineering Co.	34 01		
C. W. H. Moulton & Co.	5 50		
Phipps Bros.	7 15		
Isaac Sexton & Co.	7 50		
F. A. White	20 48		
Sundry persons	30 64		
		263 08	
Ladder, C. W. H. Moulton & Co.		4 20	
Lamps and electrical supplies:—			
F. Bryant & Co.	$38 44		
E. A. Drowne Co.	322 38		
Pettingell, Andrews Co.	10 80		
Sundry persons	5 06		
		376 68	
Lumber, Geo. W. Gale Lumber Co.		5 81	
Oil, Standard Oil Co.		7 98	
Rubber tips, E. B. Silliman		16 25	
Sand, T. F. Shaw		5 00	
Sawdust:—			
Thos. A. Griffin	$11 00		
Geo. G. Page Box Co.	16 50		
		27 50	
Shavings, C. W. H. Moulton & Co.		5 50	
Sponge, Chas. E. Stevens & Co.		7 70	
Soap:—			
Larkin Soap Manufacturing Co.	$10 00		
Phœnix Manufacturing Co.	6 50		
Chas. R. Teele	11 25		
		27 75	
Sods and gravel, Thos. O'Hara		192 02	
Sundry supplies:—			
Wm. H. Claflin & Co.	$52 00		
W. H. White	50 92		
Sundry persons	6 84		
		109 76	
Washing powder:—			
Standard Chemical Co.	$24 75		
Titer, Cook & Co.	22 50		
		47 25	
Total			59,929 17
Balance unexpended			$70 83

Public Property (School Houses, Care and Repairs)—Concluded.

SUMMARY: EXPENDED.

For Salaries of janitors:—	$25,218 56	
Fuel	12,256 21	
Lights	2,117 56	
Rents	799 00	
Alterations and repairs	14,982 80	
Supplies	4,555 04	
		$59,929 17

School Department (Care of Truants).

Appropriation			$2,800 00
Transferred from Contingent Fund			425 00
			$3,225 00
EXPENDED.			
For Board of truants, Middlesex County Truant School		$3,175 43	
Car tickets, Lowell & Suburban Street Railway Co.		4 00	
Commutation ticket, Boston & Maine Railroad		20 25	
Transportation:—			
Lucian S. Cabot	$6 00		
John Carmichael	3 90		
Francis M. Mason	6 00		
Wm. H. Porter	6 00		
		21 90	
Total			$3,221 58
Balance unexpended			$3 42

School Department (Flags).

Appropriation			$450 00
EXPENDED.			
For Ensigns, bunting, etc., I. W. Wheeler & Co.		$70 20	
Poles, H. Pigeon & Sons		47 50	
Repairing flags, Frank Greenidge		75 50	
Work on flag-staffs:—			
George B. Dunnells	$18 00		
John Lane	1 60		
		19 60	
Total			212 80
Balance unexpended			$237 20

School Department (Incidentals).

Appropriation			$1,250 00
EXPENDED.			
For Salaries of			
Secretary, S. B. Hubbard	$300 00		
Messenger, Chas. M. Jones	25 00		
		$325 00	
Amounts carried forward		$325 00	$1,250 00

School Department (Incidentals) — Concluded.

Amounts brought forward		$325 00	$1,250 00
For Advertising: —			
F. S. Hill	$6 00		
Sundry persons	7 05		
		13 05	
Car tickets, Boston Elevated Railway Company		275 00	
Cash expended, Francis Cogswell		21 25	
High School graduating exercises: —			
Expenses of theatre, Harvard University	$26 99		
Music: —			
Oliver Ditson & Co.	16 18		
Silver, Burdett & Co.	8 63		
Orchestra, Sylvan Orchestra	57 50		
Rent of piano, Briggs & Briggs	7 00		
Services, A. K. Jones	6 00		
Services with steriopticon, John H. Thurston	10 00		
		132 30	
Postage, F. M. Small		61 60	
Stationery, printing and typewriter supplies: —			
Co-operative Printing Society	$57 00		
James Cox	28 00		
G. B. Lenfest	19 00		
Lombard & Caustic	137 14		
Louis F. Weston	95 75		
Sundry persons	4 50		
		341 39	
Statistics, Lucian S. Cabot		6 00	
Typewriter repairs, Geo. H. Richter & Co.		1 00	
Vaccine virus, New England Vaccine Company		22 80	
Wire, Whitman & Couch		7 70	
Total			1,207 09
Balance unexpended			$42 91

School Department (Salaries).

Appropriation		$272,000 00
Transferred from Contingent Fund		1,050 00
		$273,050 00

RECEIVED.

For Education of children at Industrial School, Commonwealth of Massachusetts	$319 50	
Hopkins Charity Fund	683 27	
Tuition of non-residents	1,281 50	
	$2,284 27	

EXPENDED.

For Salaries of		
Superintendent, Francis Cogswell	$3,000 00	
Superintendent's clerk, Althea B. Frost	700 00	
Agent, S. B. Hubbard	2,000 00	
Clerk, Myrta E. Smith	500 00	
Amounts carried forward	$6,200 00	$273,050 00

School Department (Salaries) — Concluded.

Amounts brought forward		$6,200 00	$273,050 00
For salaries of			
Special instructors:—			
Botany, Sarah E. Brassill	$760 00		
Drawing:—			
Peter Roos	1,800 00		
Lucia N. Jennison	800 00		
Gymnastics:—			
Catherine F. Pedrick	420 00		
Mabel L. Cummings	180 00		
Music, Frederick E. Chapman	2,000 00		
Sewing:—			
Nancy T. Dawe	360 00		
Agnes Gordon	600 00		
Alice H. Nay	600 00		
Primary, Mary A. Lewis	1,100 00		
Sloyd, John D. Billings	245 00		
Services at the Sloyd school, Ernest B. McNaughton	25 00		
		8,890 00	
Salaries of teachers in			
Latin School	$18,325 00		
English High School	26,051 17		
Grammar Schools	104,723 55		
Primary Schools	75,081 30		
Wellington Training School	12,771 00		
Kindergarten Schools	11,675 95		
Substitutes	513 00		
		249,140 97	
Teachers in evening schools:—			
Drawing	$1,091 00		
High	1,439 00		
Allston	802 00		
Putnam	741 00		
Shepard	358 00		
Webster	423 00		
		4,854 00	
Salaries of truant officers		3,452 00	
Porter, John H. Lemon		500 00	
Total			273,036 97
Balance unexpended			$13 03

School Department (Text-books and Supplies).

Appropriation		$18,000 00
RECEIVED.		
For sale of and damage to books	$435 22	
EXPENDED.		
For Apparatus and supplies: —		
American Cork Company	$6 60	
Burditt & Williams	8 79	
Henry G. Carey	35 00	
Chandler & Barber	5 24	
Cutter Tower Company	6 00	
Davidson Rubber Company	75 25	
Electric Storage Battery Company	104 95	
Amounts carried forward	$241 83	$18,000 00

School Department (Text-books and Supplies) — Continued.

Amounts brought forward			$18,000 00
For apparatus and supplies:—			
Franklin Educational Company	$20 01		
Frost & Adams Company	235 21		
Greenough, Adams & Cushing	2,355 74		
Thos. Groom & Co.	22 50		
J. L. Hammett Company	501 85		
Hopkinson & Holden	10 50		
D. W. Hyde & Co.	7 25		
G. F. King & Co.	88 66		
L. E. Knott Apparatus Company	213 16		
H. Sandford Leach	17 00		
Oliver Ditson Company	6 80		
Geo. S. Perry & Co.	21 60		
Prang Educational Company	6 60		
Pulsifer, Cook & Co.	3,225 78		
Geo. H. Richter & Co.	34 76		
E. S. Ritchie & Sons	14 00		
S. Thaxter & Son	15 00		
Wadsworth, Howland & Co.	288 94		
Weeks & Potter Company	27 18		
J. O. Wetherbee	15 48		
Ziegler Electric Company	9 02		
Sundry persons	11 37		
		7,390 24	
Binding:—			
David Farquhar	$2 00		
J. H. H. McNamee	380 26		
		382 26	
Blue prints and photograph goods		9 29	
Books:—			
American Book Company	$740 11		
Edw. E. Babb & Co.	18 23		
Blodgett, Ordway & Webber	23 25		
Boston School Supply Company	163 15		
T. H. Castor & Co.	88 01		
DeWolfe, Fiske & Co.	188 31		
Ginn & Co.	3,033 51		
J. L. Hammett Company	45 94		
Hard Tack Publishing Company	2 50		
Harper & Bros.	18 48		
D. C. Heath & Co.	846 38		
Henry Holt & Co.	176 00		
Houghton, Mifflin & Co.	590 36		
Leach, Shewell & Sanborn	105 60		
Lee & Shepard	33 48		
Longmans, Green & Co.	84 00		
Perry Mason & Co.	61 60		
The Morse Company	192 00		
Phonographic Institute Company	32 50		
The Prang Educational Company	36 00		
Silver, Burdett & Co.	69 59		
Willard Small	80 18		
Thompson, Brown & Co.	1,708 44		
University Publishing Company	159 30		
Wm. Ware & Co.	375 81		
		8,872 73	
Boxes, Chas. Place		25 00	
Car tickets, Boston Elevated Railway Co.		25 00	
Amounts carried forward		$16,704 52	$18,000 00

School Department (Text-books and Supplies) — Concluded.

Amounts brought forward		$16,704 52	$18,000 00
For Cash expended for sundries:—			
Selma E. Berthold	$8 50		
Sanford B. Hubbard	7 98		
Emma A. Scudder	8 83		
Chas. F. Warner	10 37		
		35 68	
Diplomas, Boston Bank Note Company		196 02	
Expressage and moving furniture:—			
Bancroft's Express	$15 20		
H. W. Bettinson & Co.	17 20		
P. Biggin	153 75		
W. A. Nichols	80 35		
Sawin's Express	45 19		
Sundry persons	3 55		
		315 24	
Furniture, Heywood Bros. and Wakefield Co.		8 34	
Ice, Fresh Pond Ice Company		3 10	
Matches, J. A. Holmes & Co.		5 40	
Netting, Boston Dry Goods Company		67 57	
Paste, Diamond Paste Company		59 50	
Postage, F. M. Small		231 20	
Printing:—			
Co-operative Printing Society	$14 10		
Latin and High School Review	5 00		
G. B. Lenfest	7 75		
T. W. Ripley	10 00		
Louis F. Weston	154 00		
		190 85	
Ribbon and sewing supplies, Brown, Durrell Co.		67 28	
Subscriptions, New England Publishing Co.		12 15	
Telephone rent, New England Telephone Co.		68 47	
Tuning pianos, Chas. H. Fosgate		29 75	
Total			$17,995 07
Balance unexpended			$4 93

Sealer of Weights and Measures.

Appropriation		$1,600 00
RECEIVED.		
For fees for sealing	$502 09	
EXPENDED.		
For Salary of Sealer, A. F. Roberts	1,000 00	
Car tickets, Boston Elevated Railway Company	10 00	
Harness, Stillman F. Kelley, Administrator	20 00	
Horse board, Geo. D. Merrill	275 00	
Horseshoeing, John B. Rufer	18 25	
Polishing weights, Standard Brass Company	5 63	
Sealing, Edward Dowling	237 50	
Stamps, Jas. Ryan	7 90	
Sundries	17 33	
Wagon repairs, Nelson Carriage Company	6 85	
Total		1,598 46
Balance unexpended		$1 54

Sewer Department (Clay Lands).

Appropriation			$12,000 00
Transferred to Street Department, Clay Lands			4,000 00
			$8,000 00
EXPENDED.			
For Labor as per pay-rolls		$3,176 65	
Bricks, Parry Bros. & Co.		340 00	
Canvas cover, Nolan Bros.		26 90	
Cement, Waldo Bros.		531 25	
Fuel, Metropolitan Coal Company		13 50	
Hardware, Burditt & Bynner		4 40	
Iron work, Miller & Shaw		6 34	
Land, Patrick O'Brien heirs		1,600 00	
Lumber, Wm. H. Wood & Company		536 92	
Mill work, J. H. Keenan Company		291 48	
Piles, John T. Scully		297 84	
Pipe :—			
D. W. Lewis	$545 15		
Portland Stone Ware Company	147 46		
		692 61	
Rings and grates, Barbour-Stockwell Co.		63 00	
Stone, Mass. Broken Stone Company		193 05	
Teaming :—			
Thos. O'Hara	$213 75		
P. Biggin	4 50		
		218 25	
Total			7,992 19
Balance unexpended			$7 81

Sewer Department (Construction).

Appropriation			$30,000 00
RECEIVED.			
For Assessments		$9,808 22	
Land damages on Tannery Brook, City of Somerville		754 77	
Permits to drain		323 35	
		$10,886 34	
EXPENDED.			
For Labor, as per pay-rolls		$13,607 55	
Bricks : —			
D. W. De Rosay	$202 70		
Parry Bros. & Co	1,296 25		
		1,498 95	
Cement : —			
Berry & Ferguson	$165 00		
D. W. Lewis	8 33		
Waldo Bros.	31 25		
Windsor Cement Company	188 00		
		392 58	
Car tickets, Boston Elevated Railway Co.		25 00	
Cutting manholes, Austin Ford & Son		139 50	
Frames, covers, traps, etc. :—			
Barbour-Stockwell Company	$782 99		
John J. Cuddihy	180 00		
		962 99	
Amounts carried forward		$16,626 57	$30,000 00

Sewer Department (Construction) — Concluded.

Amounts brought forward		$16,626 57	$30,000 00
For Fuel: —			
Coleman Bros.	$7 50		
Dennis, Thompson, Pierce Company	129 60		
		137 10	
Gravel and Sand: —			
Thos. O'Hara	$434 50		
Josephine Stone	2 50		
		437 00	
Hardware, Burditt & Bynner		78 57	
Iron Work, Miller & Shaw		7 30	
Land, Wm. P. and Eva Lohrbach		14 93	
Lumber, Wm. H. Wood & Co.		1,568 36	
Mill work, J. H. Keenan Company.		299 20	
Piles, John T. Scully		312 78	
Pipe and cement: —			
D. W. Lewis	$2,227 54		
Portland Stone Ware Company	2,447 77		
		4,675 31	
Pipe and labor, Water Works		10 79	
Stone, Massachusetts Broken Stone Company		108 77	
Teaming: —			
P. Biggin	$11 25		
Thos. O'Hara	952 12		
John T. Scully	31 50		
B. F. St. George	18 75		
		1,013 62	
Use of engine, Geo. E. Worthen		144 00	
Use of pump, E. R. Cheney		94 75	
Total			25,529 05
Balance unexpended			$4,470 95

Sewer Department (Maintenance).

Appropriation			$20,000 00
RECEIVED.			
For Labor and supplies		$19 58	
Labor on Massachusetts Avenue, Metropolitan Water Board		30 95	
Labor and materials, Boston Elevated Railway Co.		20 50	
Money refunded		34 00	
Rent		90 00	
Sundries		4 00	
		$199 03	
EXPENDED.			
For Salaries of			
Superintendent, T. L. Pike	$2,000 00		
Clerk, Mary E. Rowen	391 25		
		$2,391 25	
Labor, as per pay-rolls		7,981 68	
Advertising, Boston Herald Company		5 26	
Bricks, Parry Bros. & Co.		310 25	
Canvas covers, Nolan Bros.		137 50	
Car tickets, Boston Elevated Railway Company		50 00	
Castings, grates, etc., Barbour-Stockwell Company		167 82	
Amounts carried forward		$11,043 76	$20,000 00

Sewer Department (Maintenance) — Continued.

Amounts brought forward		$11,043 76	$20,000 00
For Cement: —			
Berry & Ferguson	$52 00		
D. W. Lewis	36 00		
		88 00	
Cleaning catch basins, John Horigan		4,066 00	
Cutting manholes, Austin Ford & Son		11 25	
Drain work: —			
Samuel McCulloch	27 50		
Mrs. Emily E. Seavey	23 71		
		51 21	
Fuel: —			
L. G. Burnham & Co.	$10 96		
Coleman Bros.	12 25		
		23 21	
Gas, Cambridge Gas Light Company		19 21	
Gauge clock, repairs and water registers, T. M. Kenney		85 00	
Hardware, tools and repairs, and supplies: —			
Burditt & Bynner	$497 71		
Chas. H. Goldsmith	38 10		
James Maitland	85 09		
John McNamee's Sons	35 36		
Whittier Hardware Company	35 86		
		692 12	
Harness and repairs: —			
F. Ivers & Son	$97 25		
Wm. H. Roberts	24 00		
		121 25	
Hay and grain, E. R. Luke & Co.		332 95	
Heating apparatus repairs, Greene & Co.		24 77	
Horses: —			
W. F. Holmes	$100 00		
G. F. Whiting & Co.	185 00		
		285 00	
Horse clipping, Ferris & Co.		6 00	
Horseshoeing, John F. Gurry		122 50	
Hose, rubber goods and packing: —			
Boston Woven Hose Company	$87 59		
Robert Josselyn	186 06		
		273 65	
Iron work, Miller & Shaw		223 63	
Ladder, C. W. H. Moulton & Co.		10 80	
Lumber, Wm. H. Wood & Co.		127 42	
Mill work: —			
J. H. Keenan Company	$111 51		
D. C. Scranton	58 73		
		170 24	
Oil clothing, H. M. Sawyer & Son		32 00	
Oil, Standard Oil Company		25 69	
Oatmeal, Charles James		9 50	
Painting, etc., J. L. P. Ackers		50 55	
Pipe: —			
D. W. Lewis	$218 56		
Portland Stone Ware Company	60 80		
		279 36	
Piles, John T. Scully		95 25	
Printing, Cambridge Chronicle Company		59 90	
Amounts carried forward		$18,330 22	$20,000 00

Sewer Department (Maintenance) — Concluded.

Amounts brought forward		$18,330 22	$20,000 00
For Proportional part of repairing sewer at boundary line, City of Somerville		63 22	
Repairs, Water Works		10 10	
Repairing tools :—			
Chas. H. Goldsmith	$6 90		
Jas. Maitland	31 43		
John McNamee's Sons	23 64		
		61 97	
Seed and meal, L. G. Stone & Co.		15 00	
Stone :—			
John J. Cuddihy	$42 00		
Massachusetts Broken Stone Company	196 51		
		238 51	
Sundries		21 38	
Teaming :—			
Thos. O'Hara	$382 51		
B. F. St. George	31 50		
		414 01	
Use of pump, E. R. Cheney		12 00	
Wagon repairs :—			
F. Ivers & Son	$111 50		
Chas. Waugh & Co.	29 75		
		141 25	
Total			19,307 66
Balance unexpended			$692 34

Sinking Funds (Clay Lands).

Appropriation	$3,500 00
EXPENDED.	
For amount as required by City Ordinance for payment of debt, Commissioners of Sinking Funds	3,500 00

Sinking Funds (General).

Appropriation			$100 437 50
EXPENDED.			
For Salaries :—			
Treasurer, Wm. W. Dallinger	$300 00		
Secretary, John McDuffie	25 00		
		$325 00	
Rent of box, Boston Safe Deposit Co.		40 00	
Amount as required by City Ordinance for payment of debt, Commissioners of Sinking Funds		100,072 50	
Total			100,437 50

Sinking Funds (Harvard Bridge).

Appropriation	$8,000 00
EXPENDED.	
Amount as required by City Ordinance for payment of debt, Commissioners of Sinking Funds	8,000 00

Soldiers' Relief.

Appropriation			$5,000 00
Transferred to State Aid			1,300 00
			$3,700 00
RECEIVED.			
Money not called for on pay-rolls		$8 00	
EXPENDED.			
For Aid, as per pay-roll:—			
City aid	$568 00		
State aid	2,876 00		
		3,444 00	
Printing:—			
Cambridge Chronicle Company	$4 50		
Edw. F. McKenna	14 25		
		$18 75	
Total			3,462 75
Balance unexpended			$237 25

State Aid.

Appropriation			$24,000 00
Transferred from Soldiers' Relief			1,300 00
			$25,300 00
RECEIVED.			
From the Commonwealth of Massachusetts in reimbursement, in part, of the amount the city has advanced, in conformity to the laws of the State, to volunteers and their families, or other dependents of volunteers in the army and navy:—			
For military aid	$971 18		
State aid	12,682 00		
Burials of soldiers and sailors	490 00		
		$14,143 18	
Aid		305 41	
Money not called for on pay-roll		187 50	
		$14,636 09	
EXPENDED.			
For Salary of Clerk, Chas. L. Russell		$900 00	
State aid	$13,550 00		
Military aid	1,350 00		
Soldiers' and sailors' aid	6,855 00		
		21,755 00	
Aid:—			
Town of Leominster	180 00		
Town of Lunenburg	15 00		
Town of Melrose	119 29		
		314 29	
Board and care:—			
Cambridge Almshouse	215 75		
Danvers Lunatic Hospital	508 39		
Medfield Insane Asylum	292 00		
Worcester Insane Asylum	169 46		
Worcester Lunatic Hospital	67 32		
		1,252 92	
Amounts carried forward		$24,222 21	$25,300 00

State Aid — Concluded.

Amounts brought forward		$24,222 21	$25,300 00
For Burials:—			
Daniel P. Danehey	$35 00		
David Fudge & Son	35 00		
Jos. J. Kelley	105 00		
H. D. Litchfield	245 00		
C. H. Lockhart	140 00		
John S. McGowan	35 00		
Wm. Ross & Son	35 00		
M. J. Shea	35 00		
Shea Bros.	35 00		
W. A. Taylor	35 00		
		735 00	
Carriage hire, M. J. Fairbanks		3 00	
Car tickets, Boston Elevated Railway Company		15 00	
Directory, E. F. Hunt & Co.		3 00	
Fuel:—			
Baker-Hunnewell Company	$74 35		
Geo. M. Smith	18 25		
		92 60	
Refreshments, M. R. Jones		10 00	
Stationery and printing:—			
Cotton & Gould	$9 75		
Powell & Co.	78 25		
Rhoades & Co.	2 00		
Stationery Department	13 12		
		103 12	
Supplies, C. F. Holmes		86 00	
Traveling expenses, C. L. Russell		5 94	
Typewriting, E. W. Pike		13 00	
Total			$25,288 87
Balance unexpended			$11 13

Stationery and Printing.

Appropriation			$3,000 00
Surplus receipts			13 14
			$3,013 14
Transferred to City Messenger Department			60 00
			$2,953 14
RECEIVED.			
From sundry departments for supplies		$1,177 53	
EXPENDED.			
For Advertising, Cambridge Chronicle Company		21 20	
Binding:—			
David Farquhar	$27 05		
J. H. H. McNamee	57 80		
		84 85	
Examining bills, Charles Walker		12 50	
Postage, F. M. Small		850 00	
Printing:—			
Warren T. Billings	$18 50		
Cambridge Chronicle Company	100 27		
Co-operative Printing Society	65 00		
Amounts carried forward	$183 77	$968 55	$2,953 14

Stationery and Printing — Concluded.

Amounts brought forward	$183 77	$968 55	$2,953 14
For printing:—			
J. A. Cummings Printing Company	10 00		
J. Frank Facey	29 25		
Lombard & Caustic	1,298 70		
E. F. McKenna	11 50		
Louis F. Weston	7 00		
John Wilson & Son	26 00		
		1,566 22	
Stationery: —			
Blackbird Pen Company	$17 75		
Cotton & Gould	192 47		
Greenough, Adams, and Cushing	110 54		
Summer & Goodwin	5 50		
		326 26	
Sundries		8 00	
Total			2,869 03
Balance unexpended			$84 11

Street Department (Bridges).

Appropriation		$6,500 00
Transferred to Bridge Department	$1,600 00	
Transferred to Street Department, Collection of Ashes	200 00	1,800 00
		$4,700 00

EXPENDED.

For Salaries of draw-tenders: —			
Wm. Burgess	$611 43		
John Gaughan	690 00		
Geo. A. Morgan	366 86		
John F. Powers	734 00		
		$2,402 29	
Labor, as per pay-rolls		992 50	
Furniture, Pettingell & Pear		9 50	
Hardware, tools and supplies: —			
Brock Bros.	$6 25		
Burditt & Bynner	40 14		
Dodge, Haley & Co.	83 97		
H. H. Harvey	3 20		
New England Bolt and Nut Company	39 54		
F. A. White	30 98		
		204 08	
Labor, Fitchburg Railroad Company		56 75	
Lead, Boston Lead Manufacturing Company		88 82	
Lumber: —			
Geo. W. Gale Lumber Company	$528 02		
Henry J. Winde	21 20		
Wm. H. Wood & Co.	50 06		
		599 28	
Metal coating, Edw. Smith & Co.		26 51	
Repairing bridge:—			
Wm. Elliott	$3 25		
Wm. H. Ryan & McPhee	290 00		
		293 25	
			4,672 98
Balance unexpended			$27 02

Street Department (Cleaning).

Appropriation			$24,000 00
Transferred from Street Department, Construction			2,500 00
			$26,500 00
EXPENDED.			
For Labor as per pay-rolls		$23,998 47	
Express, Hatch & Co.		3 65	
Freight		2 65	
Hardware, tools and supplies: —			
Ames Plow Company	$62 51		
Burditt & Bynner	43 32		
		105 83	
Sweepers and repairs: —			
Barbour-Stockwell Company	$16 46		
Edson Manufacturing Company	77 62		
Good Roads Machine Company	18 65		
Hickory Broom Fibre Company	29 30		
Chas. Hvass	105 00		
		247 03	
Teaming as per pay-rolls		2,142 19	
Total			$26,499 82
Balance unexpended			18

Street Department (Collection of Ashes).

Appropriation			$20,000 00
Transferred from Street Department, Construction			1,000 00
Transferred from Street Department, Bridges			200 00
			$21,200 00
EXPENDED.			
For Labor, as per pay-rolls		$18,211 48	
Harness dressing, John H. Fuller		34 50	
Harness and repairs, Hugh McCaffrey		14 80	
Hay, grain and straw: —			
J. Cushing & Co.	161 10		
C. F. & G. W. Eddy	170 71		
Leavitt, Sanborn & Co.	213 76		
Lord & Webster	34 09		
Merrill & Glazier	595 03		
Scott & Bridge	108 09		
Geo. G. Wright	747 85		
		2,030 63	
Horses: —			
James M. Boutwell	$100 00		
Edgar Snow	715 00		
		815 00	
Lumber: —			
Geo. W. Gale Lumber Company	14 78		
Henry J. Winde	66 05		
		80 83	
Mill work, Ira G. Hersey		7 96	
Sled shoes, Barbour-Stockwell Company		3 35	
Total			21,198 55
Balance unexpended			$1 45

Street Department (Construction).

Berkshire, Willow and York Streets.

Appropriation			$9,900 00
Transferred to Street Department, Cleaning		$2,500 00	
Transferred to Street Department, Collection of Ashes		1,000 00	
			3,500 00
			$6,400 00
EXPENDED.			
For Labor, as per pay-rolls		$2,115 14	
Freight, Fitchburg Railroad Company		40 00	
Gravel: —			
Fitchburg Railroad Company	$8 00		
Chas. McMahon	38 00		
Wm. B. Mullen	1,375 09		
		1,421 09	
Lumber and cement, Geo. W. Gale Lumber Co.		29 84	
Mason work, Thos. Leahy & Son		77 50	
Stone: —			
Austin Ford & Son	954 81		
John Harrington	12 75		
S. and R. J. Lombard	1,195 32		
Chas. McMahon	40 00		
		2,202 88	
Teaming as per pay-rolls		453 37	
Total			6,339 82
Balance unexpended			$60 18

Street Department (Maintenance).

Appropriation			$70,000 00
Add surplus revenue			300 00
			$70,300 00
RECEIVED.			
For Apples		$63 30	
Ashes, filling and scrapings		1,514 47	
Barrels		3 00	
Board of horse		235 71	
Cracked stone		4 35	
Hay		20 00	
Labor		308 06	
Manure		224 00	
Old copper		57 75	
Use of steam roller		3 75	
		$2,434 39	
EXPENDED.			
For Salaries of			
Superintendent Chas. A. Brown	$2,000 00		
Clerks: —			
Geo. M. Clukas	1,260 00		
Georgie W. Sanborn	254 50		
Bessie W. Sprague	2 25		
Laborers, as per pay-roll	37,275 32		
		$40,792 07	
Amounts carried forward		$40,792 07	$70,300 00

Street Department (Maintenance) — Continued.

Amounts brought forward		$40,792 07	$70,300 00
For Barrels, Goepper Bros.		10 00	
Brooms, A. M. Loker		40 00	
Carriage and wagon repairs :—			
Barbour-Stockwell Company	$33 50		
Chapman Carriage Company	113 00		
Ira G. Hersey	35 56		
F. Ivers & Son	20 45		
Henry J. Winde	153 59		
		356 10	
Car tickets, Boston Elevated Railway Company		20 00	
Cash for sundries, Chas. A. Brown		41 96	
Committee expenses :—			
Carriage hire :—			
Irving Blake	$17 50		
Chas. W. Dailey	8 00		
C. H. Lake	8 50		
Ralph Smith & Co.	6 00		
Refreshments :—			
M. R. Jones	32 50		
Mansion House	5 00		
		77 50	
Damages :—			
Jeremiah Crimmins	$36 00		
Edward Culhane	79 04		
Owen Kelley	36 00		
Richard Walker	72 80		
		$223 84	
Expressage :—			
American Express Company	$8 00		
Bancroft's Express	7 75		
Sundry persons	90		
		$16 65	
Freight, Fitchburg Railroad Company		180 47	
Fuel :—			
Baker-Hunnewell Company	$1,047 52		
L. G. Burnham & Co.	214 80		
Dennis, Thompson, Pierce Company	43 20		
		$1,305 52	
Gravel :—			
John McGinnis	$151 75		
Wm. B. Mullen	58 65		
Josephine Stone	161 25		
		$371 65	
Hardware, tools and repairs, and supplies :—			
Joseph Breck & Sons	$88 60		
Brock Brothers	41 63		
Burditt & Bynner	176 24		
Burditt & Williams	6 83		
Burrill & Dutton	8 90		
Dodge, Haley & Co.	659 60		
F. E. Fitts Manufacturing and Supply Co.	38 69		
Harrington, King & Co.	5 06		
Daniel J. Sullivan	16 70		
F. A. White	58 97		
Sundry persons	5 23		
		$1,106 45	
Amounts carried forward		$44,542 21	$70,300 00

Street Department (Maintenance) — Continued.

Amounts brought forward		$44,542 21	$70,300 00
Harness and repairs, and horse clothing: —			
Burditt & Bynner	$33 45		
James Forgie & Son	300 30		
F. Ivers & Son	72 95		
Hugh McCaffrey	328 94		
Joseph A. Ryan	61 20		
		$796 84	
Hay, grain, etc.: —			
Ame & Co.	$7 50		
J. Cushing & Co.	1,165 36		
P. H. Dardis	380 00		
C. F. and G. W. Eddy	351 47		
Robert Fawcett	337 22		
Hosmer, Robinson & Co.	230 49		
Leavitt, Sanborn & Co.	1,093 97		
Lord & Webster	37 74		
E. R. Luke & Co.	160 00		
Scott & Bridge	595 70		
L. G. Stone & Co.	74 40		
Geo. G. Wright	934 32		
		5,368 17	
Horses: —			
Jas. M. Boutwell	$300 00		
S. and R. J. Lombard	200 00		
Edgar Snow	770 00		
		1,270 00	
Horse board, M. J. Fairbanks		10 00	
Horse clipping, Geo. J. Smith		6 00	
Horseshoeing, W. F. Garrett		3 00	
Hose, etc., Boston Woven Hose Company		7 25	
Hydraulic jack, A. O. Norton		50 00	
Loading cars, Wm. B. Mullen		224 85	
Lumber: —			
Geo. W. Gale Lumber Company	$85 51		
Wm. H. Wood & Co.	7 92		
		93 43	
Office expenses: —			
Advertising, Cambridge Chronicle Co.	$10 82		
Directory, E. F. Hunt & Co.	3 00		
Re-covering desk, Rourke & Kennedy	5 00		
Stamps and pads, Boston Stencil and Stamp Works	8 25		
Statonery, printing and typewriting supplies: —			
Warren T. Billings	29 00		
Cambridge Chronicle Company	33 24		
Cotton & Gould	30 85		
Lombard & Caustic	43 41		
Stationery Department	59 16		
United Typewriter and Supplies Co.	6 50		
		229 23	
Oils, paints, drugs, etc.: —			
Chas. A. Claflin	$92 90		
Clark, Brown & Co.	34 78		
John H. Fuller	68 50		
W. A. Morrison	21 40		
Rust & Richardson Drug Company	33 93		
Standard Oil Company	34 38		
Amounts carried forward	$285 89	$52,600 98	$70,300 00

Street Department (Maintenance) — Continued.

Amounts brought forward	$285 89	$52,600 98	$70,300 00
For oils, paints, drugs, etc.:—			
L. G. Stone & Co.	3 50		
Underhay Oil Company	29 57		
		$318 96	
Professional services, Boston Veterinary Hospital		10 00	
Stable repairs and supplies:—			
Carpentry, W. H. Norris	378 90		
Disinfectant, S. A. Dinsmore & Co.	61 20		
Hardware and supplies:—			
Jos. Breck & Sons	10 50		
Brock Bros.	29 53		
Burditt & Williams	38 48		
Burditt & Bynner	53 42		
New England Bolt and Nut Company	52 60		
F. A. White	27 66		
Sundry persons	11 10		
Heating apparatus and repairs:—			
Greene & Co.	12 58		
Moynahan & Co.	66 90		
Lighting, Cambridge Electric Light Co.	308 90		
Lumber and Cement:—			
Geo. W. Gale Lumber Company	245 91		
Wm. H. Wood & Co.	217 88		
Mantel, Shaw & Remby	15 00		
Mason work:—			
A. W. Curtis	12 18		
Thos. Leahy & Son	2 12		
H. J. Orcutt	7 14		
Reuel Thomas	318 88		
Mill work, Ira G. Hersey	17 80		
Oakum and pitch, J. Baker & Co.	6 50		
Plates, bolts, etc.:—			
Chelmsford Foundry Company	545 74		
Edw. Kendall & Sons	26 85		
Plumbing, Greene & Co.	42 00		
Roof repairs, Howard F. Peak	27 47		
Sundry supplies	7 75		
Toe calks, Superior Toe Calk Manufacturing Company	5 00		
Wiring and electrical supplies:—			
Anchor Electric Company	64 18		
F. Bryant & Co.	3 00		
Inspection of Wires	57 80		
		2,674 97	
Stone:—			
Thos. Joy (paving blocks)	82 58		
Massachusetts Broken Stone Company	578 41		
Sundry persons (field stone)	11,511 17		
		12,172 16	
Steam roller repairs and supplies:—			
Edwin Allen, Agent	25 00		
Barbour-Stockwell Company	38 92		
Wm. H. Gallison Company	52 15		
Gould Packing Company	10 16		
Harrisburg Foundry and Machine Co.	10 00		
J. H. Houghton	47 38		
Edw. Kendall & Sons	108 41		
Amounts carried forward	$292 02	$67,777 07	$70,300 00

Street Department (Maintenance) — Concluded.

Amounts brought forward	$292 02	$67,777 07	$70,300 00
For steam roller repairs and supplies: —			
C. W. Leatherbee Lumber Company	8 64		
Miller & Shaw	164 37		
Wm. C. Oastler	44 00		
Sundry persons	2 71		
		511 74	
Stone crusher repairs and supplies: —			
Barbour-Stockwell Company	$73 37		
Boston Belting Company	10 43		
Geo. W. Gale Lumber Company	17 45		
Wm. H. Gallison Company	24 95		
Good Roads Machinery Company	159 00		
J. H. Houghton	247 25		
Edw. Kendall & Sons	438 31		
D. W. Lewis	12 25		
M. W. Sands	27 00		
Steele & Condict	153 06		
Taylor Iron and Steele Company	119 41		
Sundry persons	16 47		
		1,298 95	
Sundries		46 69	
Telephone rent and tolls		496 68	
Teaming		131 00	
Use of buggy, Chas. Waugh & Co.		14 00	
Work on flag-staffs, David Cass		23 30	
Total			$70,299 43
Balance unexpended			57

Street Department (Clay Lands).

Appropriation			$4,000 00
EXPENDED.			
For Labor, as per pay-rolls		672 12	
Ballast, Wm. B. Mullen		18 61	
Freight, Fitchburg Railroad Company		163 00	
Gravel: —			
John McGinnis	11 50		
Wm. B. Mullen	66 75		
Josephine E. Stone	7 25		
		85 50	
Iron work, Miller & Shaw		10 56	
Stone: —			
James P. McSorley	15 00		
Wm. B. Mullen	124 05		
Sundry persons	899 72		
		1,038 77	
Teaming, as per pay-rolls		715 55	
Transportation, Fitchburg Railroad Co.		30 00	
Total			2,734 11
Balance unexpended			$1,265 89

Street Department (Paving).

Appropriation			$34,000 00
Surplus receipts			265 00
Transferred from Street Department, Watering			1,000 00
			$35,265 00
RECEIVED.			
For Edgestone and sidewalk assessments		$21,749 63	
Labor and materials		527 01	
		$22,276 64	
EXPENDED.			
For Labor as per pay-rolls		$16,150 64	
Artificial stone sidewalks:—			
W. A. Murtfeldt	$1,214 59		
Simpson Brothers	212 49		
		$1,427 08	
Bicycle repairs, J. L. Moseley		13 35	
Bricks, M. W. Sands		4,287 27	
Cement, Geo. W. Gale Lumber Company		27 50	
Freight, Fitchburg Railroad Company		936 00	
Globes, Union Glass Company		16 05	
Gravel:—			
Wm. B. Mullen	$32 34		
Josephine E. Stone	5 50		
		$37 84	
Hardware and tools:—			
Ames Plow Company	$ 74		
Joseph Breck & Sons	36 66		
Burditt & Bynner	4 83		
		42 23	
Laying concrete crossings and gutters, Simpson Brothers		673 89	
Loading cars, Wm. B. Mullen		240 17	
Lumber, Geo. W. Gale Lumber Company		1 28	
Oil, Standard Oil Company		38 85	
Printing, Cambridge Chronicle Company		5 25	
Re-cutting blocks, Thos. Joy		57 12	
Stone:—			
Boston Elevated Railway Company	$208 13		
Austin Ford & Son	5,092 50		
S. & R. J. Lombard	3,244 92		
		8,545 55	
Teaming, as per pay-rolls		2,764 18	
Total			35,264 25
Balance unexpended			75

Street Department (Rebuilding Massachusetts Avenue).

Appropriation			$20,000 00
EXPENDED.			
For Labor as per pay-rolls		$7,378 74	
Hardware and tools, Jos. Breck & Sons		62 65	
Iron and steel, Taylor Iron and Steel Company		117 99	
Recutting paving blocks, Thos. Joy		4 00	
Stationery, Cotton & Gould		12 50	
Amounts carried forward		$7,575 88	$20,000 00

Street Department (Rebuilding Massachusetts Avenue)— Concluded.

Amounts brought forward		$7,575 88	$20,000 00
For Stone :—			
Massachusetts Broken Stone Company	$58 50		
William J. McCarthy	4,976 19		
Sundry persons	4,492 29		
Weighing stone, Wm. C. Reycroft	84 62		
		9,611 60	
Teaming, as per pay-rolls		2,812 52	
Total			$20,000 00

Street Department (Watering).

Appropriation			$25,500 00
Transferred to Street Department, Paving			1,000 00
			$24,500 00
RECEIVED.			
For Assessments		$16,271 80	
Collections		1,049 67	
		$17,321 47	
EXPENDED.			
For Salary of			
Superintendent, Chas. McHugh	$741 00		
Clerical assistance	113 25		
Laborers, as per pay-roll	1,353 26		
		2,207 51	
Bicycle, J. L. Moseley		50 00	
Bicycle repairs and supplies, J. L. Moseley		14 45	
Binding, David Farquhar		8 00	
Carpentry, W. Fillmore & Co.		91 00	
Cart repairs and fittings :—			
Abbott-Downing Company	$26 00		
Duff Spring Company	262 85		
J. L. & H. K. Potter	60 75		
Sundry persons	8 61		
		358 21	
Conductors, Boston Woven Hose Co.		15 78	
Hardware, supplies, etc. :—			
Barbour-Stockwell Company	$95 20		
Burditt & Williams	1 30		
Dodge, Haley & Co.	120 66		
F. A. White	1 25		
		218 41	
Lumber, Henry J. Winde		351 00	
Mill work, Ira G. Hersey		14 90	
Paints, oils, etc. :—			
Burditt & Bynner	$448 45		
Wadsworth, Howland & Co.	19 02		
F. A. White	4 80		
		472 27	
Repairs, Water Works		22 88	
Sprinkling by contract, sundry persons		20,505 82	
Strainers, Morss & Whyte		54 05	
Stationery, Cotton & Gould		20 50	
Use of carriage, Chapman Carriage Company.		10 00	
Total			$24,414 78
Balance unexpended			$85 22

Treasury Department.

Appropriation			$14,700 00
RECEIVED.			
For fees from sundry persons		$2,311 09	
EXPENDED.			
For Salaries of			
City Treasurer, Wm. W. Dallinger	$3,000 00		
Clerks:—			
E. G. Stevens	1,422 00		
E. J. Howlett	1,252 00		
J. H. Webber	1,061 33		
C. H. Dodge	939 00		
E. E. Estes	782 50		
P. B. Dallinger	626 00		
Temporary clerks	866 32		
		9,949 15	
Advertising:—			
Boston Daily Advertiser	$29 25		
Cambridge Chronicle Company	119 95		
Investor Publishing Company	10 00		
		159 20	
Car tickets, Boston Elevated Railway Company		25 00	
Carriage hire, M. J. Fairbanks		488 00	
Commissions for collecting taxes:—			
Jas. H. Cox	$155 00		
Joseph Fox	658 63		
Warren Ivers	914 27		
Geo. H. Lambert	10 00		
John F. Murphy	16 00		
		1,753 90	
Directories:—			
W. A. Greenough & Co.	$3 00		
E. F. Hunt & Co.	3 00		
Sampson, Murdock Company	5 00		
		11 00	
Postage, F. M. Small		1,181 40	
Professional advice, Storey & Thorndike		5 00	
Stationery and printing, etc.:—			
Warren T. Billings	$46 75		
Cotton & Gould	60 97		
John H. Ford	248 25		
Lombard & Caustic	7 99		
A. E. Martell & Co.	22 80		
Edw. F. McKenna	20 25		
Morgan Envelope Company	18 00		
Stationery Department	36 98		
Louis F. Weston	9 50		
Sundry persons	3 00		
		474 49	
Stamps		10 00	
Sundries		14 73	
Telephone rent and tolls		210 90	
Total			14,282 77
Balance unexpended			$417 23

Water Works (Construction).

Appropriation			$30,000 00
RECEIVED.			
For Materials		$68 85	
Pipe		7 88	
Premium on bonds		1,098 00	
		$1,174 73	
EXPENDED.			
For Labor as per pay-rolls		$2,471 00	
Carpentry, Thos. S. Hall		59 00	
Drain work, Samuel McCulloch		122 20	
Execution of Court, William Roberts		1,877 09	
Fountains, Henry F. Jenks		525 00	
Freight, Owners of Schooner "Lizzie Lane"		491 47	
Galvanized iron work at stable, S. C. Higgins		42 50	
Hardware, tools, etc.:—			
Barbour-Stockwell Company	$13 58		
Jos. Breck & Sons	7 20		
Burditt & Bynner	20 34		
Chandler & Farquhar	8 72		
James Maitland	39 24		
		89 08	
Hydrants, gates, valves, etc.:—			
Chapman Valve Manufacturing Co.	$56 00		
Coffin Valve Manufacturing Company	494 96		
Norwood Engineering Company	55 56		
A. P. Smith Manufacturing Company	70 00		
		676 52	
Lead, Richards & Co.		701 39	
Lumber:—			
Geo. W. Gale Lumber Company	$134 06		
Wm. H. Wood & Co.	18 42		
		152 48	
Meters and repairs:—			
Hersey Manufacturing Company	$591 00		
Neptune Meter Company	1,395 35		
Union Water Meter Company	36 00		
		2,022 35	
Overcharge on pipe, Park Department		72 98	
Pipe:—			
McNeal Pipe and Foundry Company	$1,425 72		
Walworth Manufacturing Company	5 40		
Warren Foundry Company	10,239 55		
		11,670 67	
Plans, C. Herbert McClare		275 00	
Plaster work, Wm. J. Heron		61 95	
Plumbing, Arthur W. Balcom		112 49	
Stable, Samuel J. Kelley		4,000 00	
Stable fittings, W. A. Snow & Co.		353 10	
Sundries		8 57	
Teaming, Chas. McMahon		182 63	
Vane on stable, M. J. Sheehan		40 00	
Total			26,007 47
Balance unexpended			$3,992 53

Water Works (Fresh Pond Land).

Appropriation			$10,000 00
Additional appropriation			53,000 00
			$63,000 00
RECEIVED.			
For premium on bonds		$3,486 00	
EXPENDED.			
For advertising: —			
Boston Daily Advertiser	$88 50		
Cambridge Chronicle Company	12		
		88 62	
Execution of Court, John C. Gray		52,958 75	
Land and damage, Fitchburg R. R. Corporation		9,241 20	
Total			62,288 57
Balance unexpended			$712 43

Water Works (Fresh Pond Reservoir).

Appropriation			$8,000 00
EXPENDED.			
For Labor, as per pay-rolls		$3,484 50	
Teaming, as per pay-rolls		2,200 13	
Tools: —			
Burditt & Bynner	$9 80		
Jos. Breck & Sons	40 40		
		50 20	
Total			5,734 83
Balance unexpended			$2,265 17

Water Works (Hobbs Brook Reservoir).

Appropriation			$195,000 00
Transferred to Fresh Pond Reservoir			8,000 00
			$187,000 00
RECEIVED.			
For Apples		$14 00	
Grass		15 00	
Gravel		81 25	
Lumber		10 00	
Old buildings, etc.		427 00	
Old material		23 01	
Premium on bonds sold		5,055 00	
Water tank		5 00	
Wood		1 00	
		$5,631 26	
EXPENDED.			
For Labor as per pay-roll		$6,190 23	
Engineers as per pay-roll		4,327 02	
Advertising: —			
Boston Daily Advertiser	$18 38		
Boston Herald Company	21 75		
Amounts carried forward	$40 13	$10,517 25	$187,000 00

Water Works (Hobbs Brook Reservoir) — Continued.

Amounts brought forward	$40 13	$10,517 25	$187,000 00
For advertising: —			
F. S. Hill	7 25		
Investor Publishing Company	10 00		
Waltham Tribune Company	11 25		
Sundry persons	4 88		
		73 51	
Analysis, W. T. Sedgwick		100 00	
Andirons, F. A. Walker & Co.		12 00	
Awning, Brock Bros.		37 55	
Building stable and house, Robert E. Glancy		3,729 79	
Building gate-house, M. N. Stearns		3,304 40	
Carpentry, R. E. Glancy		26 64	
Carriage hire: —			
M. J. Fairbanks	$100 00		
Grafton E. Kirwin	361 50		
		461 50	
Cash paid American Surety Company to continue bond, Frank X. Saucier		10 00	
Contracts for excavating: —			
T. W. Kinser & Sons	$109,521 34		
Extras	2,419 95		
Peter J. O'Malley	1,982 43		
Auguste Saucier	14,525 21		
Frank X. Saucier	5,163 95		
		133,612 88	
Contract, highway at storage basin, Peter J. O'Malley		4,661 98	
Cost of building cesspool and drain-pipe, Fred W. Jackson		100 00	
Curtains, Sumner Getchell		25 20	
Damages, overflowing land at Kendal Green, Sidney E. Tyler		25 00	
Drilling well, H. S. Coates & Co.		420 00	
Examining titles, Clarence F. French		40 00	
Executions of Court: —			
Andrew J. Gallagher	$8,974 25		
Scolestica Jurada	2,513 08		
		11,487 33	
Fences: —			
Jas. W. McCabe	$254 25		
Peter J. O'Malley	177 80		
Frank X. Saucier	1,652 32		
		2,084 37	
Fuel and lime, G. F. Frost		61 10	
Hardware, tools and repairs, and supplies: —			
Jos. Breck & Sons	$5 50		
Buff & Berger	25 00		
Dodge, Haley & Co.	6 62		
J. A. Higgins	20 10		
J. D. Jewett & Co.	40 00		
T. W. Kinser & Sons	45 20		
Peter J. O'Malley	6 65		
Perrin, Seamans & Co.	101 38		
Sundry persons	5 08		
		255 53	
Heating apparatus, etc., Fred. H. Kirwin		40 30	
Horseshoeing, P. Larkin		8 25	
Amounts carried forward		$171,094 58	$187,000 00

Water Works (Hobbs Brook Reservoir) — Continued.

Amounts brought forward		$171,094 58	$187,000 00
For Inspections: —			
Barge hire: —			
Elliott & Duvey	$8 00		
John Nixon	7 00		
Carriage hire: —			
M. J. Fairbanks	$16 00		
Grafton E. Kirwin	596 95		
Dinners, M. R. Jones	257 25		
		885 20	
Insurance, T. H. Raymond		15 00	
Labor, T. W. Kinser & Sons		15 00	
Land, Edward Stackpole		3,207 95	
Land and damage, A. Judson Merrill		150 00	
Lumber, Buttrick Lumber Company		47 33	
Mason work, repairs at Winter Street dam, M. N. Stearns		31 00	
Papering, Geo. P. Knowlton		82 20	
Pipe, J. A. Higgins		36 00	
Plans and specifications, Chas. Greco		45 00	
Plumbing, Fred. H. Kirwin		12 36	
Prints, Harriette Anthony		18 00	
Pump, Walworth Manufacturing Company		7 80	
Rebate on rent, Frank X. Saucier		20 00	
Repairing fence, Frank X. Saucier		76 04	
Repairs on gate house, R. E. Glancy		10 49	
Screens, Sumner Getchell		26 40	
Seeds, etc., Joseph Breck & Sons		12 02	
Services of Engineering Department		1,000 00	
Services of Law Department		1,500 00	
Services of experts, etc.: —			
C. S. Bruce	$20 00		
F. E. Gleason	15 00		
S. S. Gleason	100 00		
A. Greenwood, M.D.	440 00		
Alfred Hemenway, Samuel B. Capen, Roswell S. Barrows } Commissioners	217 50		
D. F. Hutchinson	24 00		
Fred W. Jackson, M.D.	80 00		
Henry J. Jennison	100 00		
Arthur H. Jewett	25 00		
J. L. Nason & Co.	100 00		
H. R. Page	25 00		
Leonard A. Saville	17 50		
A. B. Smith	10 00		
E. P. Smith	75 00		
G. F. Tewksbury	72 00		
Cornelius Wellington	75 00		
Walter Wellington	20 00		
C. S. Wheeler	75 00		
Jas. B. Wheeler	21 00		
		1,512 00	
Special cars, Boston Elevated Railway Company		15 00	
Stationery, printing, etc.: —			
Cambridge Chronicle Company	$44 77		
Geo. E. Crosby & Co.	16 50		
T. H. Lane	6 00		
		67 27	
Amounts carried forward		$179,886 64	$187,000 00

Water Works (Hobbs Brook Reservoir) — Concluded.

Amounts brought forward		$179,886 64	$187,000 00
Stone, Mass. Broken Stone Company		300 00	
Sundries		22 07	
Teaming		2,282 34	
Telephone rent and tolls		77 97	
Tinting ceilings, B. C. Hazel		25 90	
Use of tent, R. M. Yale & Co.		10 00	
Use of transit, Walter E. Silsbee		15 00	
Total			$182,619 92
Balance unexpended			$4,380 08

Water Works (Payson Park Reservoir).

Appropriation			$45,000 00
RECEIVED.			
Error in pay-roll		$41 00	
Premiums on bonds sold		2,554 00	
		$2,595 00	
EXPENDED.			
For Labor, as per pay-roll		605 56	
Advertising, Boston Daily Advertiser		6 25	
Air pump, Geo. F. Blake Manufacturing Company		2,891 00	
Alterations at Pumping Station, Chas. E. McKinnon		2,568 00	
Bricks: —			
N. M. Cofran & Co.	$6 00		
Parry Brothers & Co.	232 50		
		238 50	
Beams, etc., Chelmsford Foundry Company		273 84	
Boilers at Fresh Pond Pumping Station, Lake Erie Boiler Works		1,656 46	
Cable, Safety Insulated Wire and Cable Company		18 60	
Carpentry: —			
E. W. Boynton & Co.	$1,362 83		
A. M. Higgins	835 20		
		2,198 03	
Carriage hire		5 00	
Castings, Wm. Campbell & Co.		9 60	
Cement, Waldo Brothers		14 10	
Cutting pipes, etc., Barbour-Stockwell Company		40 20	
Electric work at Pumping Station, F. Bryant & Co.		538 79	
Engine for electric lighting, Watertown Steam Engine Company		797 89	
Expressage: —			
Hatch & Co.	$7 45		
Sundry persons	90		
		8 35	
Freight, Fitchburg Railroad Company		15 55	
Gauge, American Steam Gauge Company		9 00	
Generator for electric lighting at Fresh Pond, Westinghouse Electric and Mfg. Company		391 00	
Gleaner heater, I. B. Davis & Son		138 50	
Hardware, tools and supplies: —			
Chandler & Farquhar	$9 37		
Morss & Whyte	4 98		
Amounts carried forward	$14 35	$12,424 22	$45,000 00

Water Works (Payson Park Reservoir) — Concluded.

Amounts brought forward	$14 35	$12,424 22	$45,000 00
For hardware, tools and supplies:—			
Walworth Manufacturing Company	6 11		
		20 46	
Lumber and cement, Geo. W. Gale Lumber Co.		247 39	
Magnesia plastic, S. C. Nightingale & Childs		10 00	
Mason work:—			
M. N. Stearns	$7 60		
Sundry persons	8 55		
		16 15	
Metal coating, Edw. Smith & Co.		13 50	
Meters:—			
Builders Iron Foundry	$100 00		
Henry P. Worthington	90 50		
		190 50	
Painting, varnishing, etc., Chas. A. Sawyer		1,204 87	
Packing, etc.:—			
Wm. B. Merrill & Co.	$185 49		
Revere Rubber Company	25 20		
		210 69	
Photographs, Harriette Anthony		39 60	
Pipe, fittings, hinges, bolts, etc.:—			
Davis & Farnum Manufacturing Co.	$22 40		
Grundry Brass Works	15 34		
Wm. Hall & Co.	81 00		
D. W. Lewis	30 15		
		148 89	
Posts, Austin Ford & Son		12 00	
Pumping engine:—			
Groshon High Duty Pumping Engine Company	$16,573 05		
Alterations and repairs to engines	2,625 24		
		$19,198 29	
Railings and posts, T. F. McGann		142 00	
Regilding vane, M. J. Sheehan		16 20	
Seeds and grass, Jos. Breck & Sons		13 30	
Services of mechanical engineer, E. D. Leavitt		3,892 60	
Services at Pumping Station:—			
Geo. W. Henderson	$165 60		
James Hunt	57 60		
		223 20	
Sods, Jas. Gray		9 00	
Stairs, Jas. Flynn		124 00	
Steam trap, Thorpe, Platt & Co.		25 20	
Steel ceiling, M. J. Sheehan		552 00	
Shades, J. A. Glass & Co.		65 00	
Stone steps, Austin Ford & Son		590 00	
Stone work, John McNamee's Sons		19 72	
Strainers, etc.:—			
Barbour-Stockwell Company	$64 60		
Chelmsford Foundry Company	6 50		
		71 10	
Sundries		7 28	
Teaming as per pay-roll		273 50	
Thermometers, Henry J. Green		27 00	
Total			39,787 66
Balance unexpended			$5,212 34

Water Works (Maintenance, General Account).

Appropriation		$61,700 00
RECEIVED.		
For Abatement	$13 50	
Apples	14 00	
Barrels	9 00	
Error on pay-roll	165 50	
Grass	185 56	
Hay	90 00	
Iron	766 83	
Labor	19 00	
Repairing hydrant	12 57	
Sleepers	69 00	
	$1,344 96	
EXPENDED.		
General account:—		
Salaries of		
Acting Superintendent, E. C. Brooks	$446 79	
Superintendent, E. C. Brooks	1,371 73	
Assistant Superintendent, Chas. B. Parker	1,500 00	
Treasurer of Sinking Funds, Wm. W. Dallinger	200 00	
Inspectors:—		
F. G. Davis	900 00	
I. H. Henderson	782 14	
C. E. McGuire	777 50	
Mechanic, B. P. Doe	1,042 87	
Laborers, as per pay-roll	21,687 92	
	28,708 95	
Advertising, Cambridge Chronicle Company	7 56	
Bicycles, Baldwin, Robbins & Co.	70 00	
Bicycle repairs, J. L. Moseley	7 75	
Binding, J. H. H. McNamee	5 00	
Carpentry:—		
C. A. Fayerweather	$9 20	
Thos. S. Hall	4 46	
W. H. Norris	62 41	
	76 07	
Carriage and wagon repairs:—		
Chapman Carriage Company	$157 85	
Wm. Elliott & Co.	1 50	
F. Ivers & Son	272 15	
Lussier & Bonin	19 00	
	450 50	
Car tickets:—		
Boston Elevated Railway Company	$175 00	
Fitchburg Railroad Company	61 20	
	236 20	
Cash expended, E. C. Brooks	13 80	
Damages, C. Edwin Kelsey	15 00	
Drain work, Samuel McCulloch	46 00	
Expressage:—		
Dodge's Express Company	$62 11	
Hatch & Co.	22 40	
Savage & Son	5 65	
Savage & Murray	70	
	90 86	
Amounts carried forward	$29,727 69	$61,700 00

Water Works (Maintenance, General Account) — Continued.

Amounts brought forward		$29,727 69	$61,700 00
For Fuel, Coleman Brothers		17 00	
Furnace, Wm. Campbell & Co.		25 00	
Gas, Cambridge Gas Light Company		16 84	
Hardware, tools, machinery and repairs :—			
American Steam Gauge Company	$8 75		
The Bristol Company	215 28		
Jos. Breck & Sons	57 54		
Brock Bros.	8 62		
Burditt & Bynner	129 31		
Wm. Campbell & Co.	40 34		
Chas. Carr	16 00		
Chapman Valve Manufacturing Co.	37 06		
Dodge, Haley & Co.	23 78		
Walter W. Field	30 63		
Chas. H. Goldsmith	5 00		
J. A. Higgins	31 72		
Henry F. Jenks	19 12		
James Maitland	257 17		
W. A. Morrison	8 26		
Standard Brass Company	5 13		
Walworth Manufacturing Company	402 66		
F. A. White	39 76		
Henry R. Worthington	17 96		
Sundry persons	18 44		
		1,372 53	
Harness and repairs, etc. :—			
M. Cavanagh	$121 80		
Jas. Forgie & Son	4 50		
		126 30	
Hay, grain and straw :—			
J. Cushing & Co.	$552 16		
G. F. Frost	18 47		
David O'Mara	33 77		
Geo. B. Pope & Co.	25 92		
Waltham Grain Company	9 60		
		639 92	
Horses, Welch & Hall		305 00	
Horseshoeing :—			
Wm. Balmer	$42 00		
Wm. Bell	9 00		
John A. Green	16 91		
John F. Gurry & Sons	84 50		
Thos. Smith	224 50		
Sundry persons	5 50		
		382 41	
Hose and packing, Boston Woven Hose Company		10 65	
Ice :—			
Boston Ice Company	$135 45		
Fresh Pond Ice Company	434 18		
		569 63	
Lumber, lime and cement :—			
Buttrick Lumber Company	$8 07		
Geo. W. Gale Lumber Company	135 87		
Wm. H. Wood & Co.	64 16		
		208 10	
Meters and repairs :—			
Hersey Manufacturing Company	$8 76		
Standard Brass Company	15 51		
	$24 27		
Amounts carried forward		$33,401 07	$61,700 00

Water Works (Maintenance, General Account) — Continued.

Amounts brought forward		$33,401 07	$61,700 00
For meters and repairs:—			
Union Water Meter Company	$32 65		
Henry R. Worthington	151 90		
Sundry persons	7 80		
		216 62	
Mill work, P. R. Rideout		51 32	
Oil, Standard Oil Company		43 04	
Painting and whitening:—			
Clarence G. Reed	$5 62		
Chas. A. Sawyer	117 35		
		122 97	
Papering, Thos. Hughes		11 32	
Pipe and fittings:—			
Davis and Farnum Manufacturing Company	$12 35		
D. W. Lewis	17 21		
Walworth Manufacturing Company	177 12		
		206 68	
Plants, Shady Hill Nursery Company		8 00	
Plumbing:—			
Arthur W. Balcom	$52 07		
Levi Hawkes	37 00		
		89 07	
Professional services:—			
D. L. Bolger	$37 60		
Boston Veterinary Hospital	10 00		
		47 00	
Rent of box, Cambridge Safe Deposit and Trust Co.		20 00	
Rent of board room, office and shop at City Hall		2,000 00	
Seal press, A. J. Berge & Co.		5 50	
Services:—			
French & Bryant (civil engineers)	$269 84		
Chas. H. Morse (expert)	200 00		
F. L. & J. C. Olmstead (landscape architects)	1,025 63		
		1,495 47	
Stationery, printing and typewriter supplies:—			
Cambridge Chronicle Company	$282 37		
Sundry persons	2 88		
Thorp & Martin Company	163 08		
		448 33	
Stone, Massachusetts Broken Stone Company		302 11	
Subscriptions:—			
F. L. Beunke	$1 50		
Engineering News	5 00		
Water and Gas Review Publishing Co.	1 00		
		7 50	
Sundries		37 44	
Tables and chairs:—			
Phillips Bros. & Co.	$4 50		
Williams Table and Lumber Company	15 50		
Worcester Bros.	16 00		
		36 00	
Teaming, sundry persons		416 63	
Telephone rent and tolls		$323 17	
Amounts carried forward		$39,289 24	$61,700 00

Water Works (Maintenance, General Account) — Continued.

Amounts brought forward		$39,289 24	$61,700 00
For testing pipes: —			
Walter E. Hadley	$30 00		
Chas. W. Hodson	30 00		
		60 00	
Tyrewriter, John P. Lovell Arms Company		50 00	
Use of Horses and wagons: —			
F. D. Bartlett	$23 00		
Ralph Smith & Co	45 00		
		68 00	
Office expenses: —			
Salaries of			
Water registrar, Walter H. Harding	$2,200 00		
Clerks: —			
H. L. Lincoln	1,200 00		
H. F. Milligan	782 50		
G. K. Dame	626 00		
M. M. Robbins	626 00		
		5,434 50	
Car tickets, Boston Elevated Railway Co.		75 00	
Directories: —			
W. A. Greenough & Co.	$3 00		
E. F. Hunt & Co.	3 00		
		6 00	
Electrical supplies, E. A. Browne Company		12 00	
Rent of Post Office box, H. A. Thomas		6 00	
Stationery and printing: —			
Cambridge Chronicle Company	$47 75		
Cotton & Gould	43 75		
Greenough, Adams & Cushing	1 50		
Thos. Groom & Co.	5 20		
Thorp & Martin Company	177 75		
		275 95	
Subscriptions: —			
F. L. Beunke	$4 50		
Cambridge Chronicle Company	2 50		
James Cox	1 50		
		8 50	
Pumping Station: —			
Salaries of			
Engineers: —			
E. C. Brook	$632 50		
E. I. Harris	1,050 00		
Asst. Engineer, Wm. Blaisdell	1,042 86		
Laborers, as per pay-roll	4,605 28		
		7,330 64	
Beam, Chelmsford Foundry Company		5 56	
Bricks, N. M. Cofran & Co.		36 00	
Cement and lumber: —			
Geo. W. Gale Lumber Company	$33 90		
Waldo Brothers	2 50		
		36 40	
Desk, Brock Bros.		21 00	
Electrical supplies: —			
F. Bryant & Co.	$22 00		
Pettingell, Andrews Company	4 50		
		26 50	
Amounts carried forward		$52,741 29	$61,700 00

Water Works (Maintenance, General Account) — Continued.

Amounts brought forward		$52,741 29	$61,700 00
For Pumping Station :—			
Engine and boiler supplies :—			
American Steam Gauge Company	$3 30		
Geo. F. Blake Manufacturing Co.	3 76		
Butcher Polish Company	6 00		
A. W. Chesterton & Co.	80 23		
Chapman Valve Manufacturing Co.	25 46		
Crosby Steam Gauge Company	1 50		
W. A. Morrison	49 70		
N. E. Lubricant Company	17 60		
W. P. Phillips & Co.	10 55		
Roberts Iron Works Company	11 66		
Star Brass Manufacturing Company	30 00		
W. A. Wood & Co.	22 19		
		261 95	
Expressage, Hatch & Co.		14 05	
Fittings, etc. :—			
Grundy Brass Works	$4 55		
Walworth Manufacturing Company	44 14		
		48 69	
Fuel :—			
Baker-Hunnewell Company	$3,629 97		
Coleman Bros.	1,539 25		
		5,169 22	
Furnishings, F. A. Walker & Co.		7 00	
Hanging windows, E. W. Boynton & Co.		5 55	
Hardware, tools and repairs :—			
Burditt & Bynner	$29 23		
Dodge, Haley & Co.	73 25		
S. C. Higgins	8 80		
Jas. Maitland	12 62		
Sundry persons	5 66		
		129 56	
Ice, Fresh Pond Ice Company		6 65	
Inspecting boilers, Everett B. Dyer		6 20	
Oil :—			
Standard Oil Company	$7 29		
W. A. Wood & Co.	168 65		
		175 94	
Painting :—			
Henry Haley	$3 75		
Chas. A. Sawyer	55 63		
		59 38	
Plumbing, Levi Hawkes		20 18	
Plates for boiler, Lake Erie Boiler Works		11 34	
Rails, etc., Boston Elevated Railway Company		8 24	
Rent of houses :—			
E. A. Paine	$166 65		
Jas. A. Wood, assignee	26 30		
		192 95	
Repairing boiler, G. W. Henderson		52 20	
Roof repairs, John J. Blevins		42 50	
Stone work, John McNamee's Sons		17 50	
Sundries		30 46	
Telephone rent and tolls		146 50	
Work on pump, Geo. F. Blake Manufacturing Co.		210 25	
Amounts carried forward		$59,357 60	$61,700 00

Water Works (Maintenance, General Account) — Concluded.

Amounts brought forward		$59,357 60	$61,700 00
For Stony Brook Reservoir, salary of gateman, Silas Baxter		730 00	
Fence posts, Jacob F. Hagar		20 00	
Hardware and supplies: —			
Burditt & Bynner	$10 45		
J. A. Higgins	1 35		
Washburn & Moen Manufacturing Co.	15 28		
		27 08	
Lime and cement, G. F. Frost		10 15	
Lumber: —			
Buttrick Lumber Company	$14 26		
C. A. Freeman & Co.	20 25		
		34 51	
Mason work, John Lally		$172 45	
Metal coating, Edw. Smith & Co.		13 50	
Painting, W. C. Cooper		20 00	
Plumbing, Fred. H. Kirwin		15 21	
Sundries		7 25	
Teaming, W. E. Kingsbury		27 50	
Telephone rent and tolls		127 60	
Water rates, Waltham Water Works		14 00	
Total			$60,576 85
Balance unexpended			$1,123 15

SUMMARY: EXPENDED.

For General Account	$39,467 24	
Office Expenses	5,817 95	
Pumping Station	14,072 41	
Stony Brook Reservoir	1,219 25	
Total		$60,576 85

Water Works (Renewal of Main Pipe).

Appropriation			$20,000 00
Transferred to Water Works, Rates, Fines, etc. (Abatements)		$400 00	
Transferred to Water Works, Rates, Fines, etc. (Refunds)		200 00	
Transferred to Interest on Water Loan		500 00	
			1,100 00
			$18,900 00

EXPENDED.

For Labor, as per pay-roll		$10,012 50	
Car tickets, Boston Elevated Railway Company		50 00	
Drain work, Samuel McCulloch		50 25	
Fittings, valves and hydrants: —			
Barbour-Stockwell Company	$6 75		
Chapman Valve Mfg. Company	165 00		
Coffin Valve Company	1,330 98		
Davis & Farnum Mfg. Company	111 52		
Ludlow Valve Mfg. Company	100 00		
Walworth Manufacturing Company	833 28		
		2,547 53	
Amounts carried forward		$12,660 28	$18,900 00

Water Works (Renewal of Main Pipe) — Concluded.

Amounts brought forward		$12,660 28	$18,900 00
For Freight, owners of Schooner "Hazell Dell"		295 84	
Lead, Richards & Co.		843 27	
Lumber, Geo. W. Gale Lumber Company		109 73	
Packing, Hinckley Brothers & Co.		64 90	
Pipe and fittings: —			
D. W. Lewis	$20 11		
Walworth Manufacturing Company	1,005 50		
		1,025 61	
Stone, S. & R. J. Lombard		23 00	
Sundries		8 57	
Teaming: —			
Chas. McMahon	$274 33		
Peter Tumilty	13 50		
		287 83	
Tools: —			
Jos. Breck & Sons	$21 40		
Dodge, Haley & Co.	44 00		
Perrin, Seamans & Co.	7 80		
		73 20	
Wharfage of pipe, Chas. McMahon		142 68	
Total			$15,534 91
Balance unexpended			$3,365 09

Water Works (Interest on Water Loan).

Appropriation		$124,450 00
Transferred from Water Works, Renewal of Main Pipe		500 00
		$124,950 00
RECEIVED.		
For accrued interest on bonds	$455 97	
EXPENDED.		
For interest on Water Debt		124,854 00
Balance unexpended		$96 00

Water Works (Rates, Fines, etc.).

RECEIVED.		
From sundry persons for rates, fines, etc.		$306,763 07
EXPENDED.		
For Interest on Water Debt	$124,398 03	
Maintenance	70,269 01	
Abatement of rates	5,276 29	
Refund of rates	3,163 74	
Sinking Fund requirements	103,656 00	
Total		$306,763 07

Water Works (Rates, Fines, etc.).

Abatements.

Appropriation	$5,000 00
Transferred from Water Works, Renewal of Main Pipe	400 00
	$5,400 00

EXPENDED.

For abatements allowed on Water Rates	5,276 29
Balance unexpended	$123 71

Refunds.

Appropriation	$3,000 00
Transferred from Water Works, Renewal of Main Pipe	200 00
	$3,200 00

EXPENDED.

For Refund of Water Rates	3,163 74
Balance unexpended	$36 26

Water Works (Sinking Funds).

Appropriation	$103,656 00

EXPENDED.

Paid to Trustees of Sinking Fund of Water Works	$103,656 00

Water Works (Supplies).

Appropriation			$6,400 00
RECEIVED.			
For supply-pipes, etc.		$6,054 33	
EXPENDED.			
For Labor as per pay-rolls		$1,798 50	
Advertising, Cambridge Chronicle Company		60	
Hydrants, valves and castings: —			
Barbour-Stockwell Company	$6 00		
Chapman Valve Manufacturing Co.	939 20		
Davis and Farnum Manufacturing Co.	10 83		
		956 03	
Pipe and fittings: —			
Walworth Manufacturing Company	$2,225 01		
Geo. Woodman Company	84 32		
		2,309 33	
Total			5,064 46
Balance unexpended			$1,335 54

Water Works (Supplies).

Abatements.

Appropriation	$200 00
EXPENDED.	
For abatement of supply bills	18 30
Balance unexpended	$181 70

Cambridge Water Works.

In account with the City of Cambridge for the year ending November 30, 1898.

RECEIPTS AND EXPENDITURES.

Balance in the City Treasury to the credit of the Water Works, Nov. 30, 1897	$28,535 67	Expended for General Construction	$26,007 47
Received from sale of bonds	300,000 00	Fresh Pond Land	62,288 57
Premiums	12,193 00	Fresh Pond Reservoir	5,734 83
Accrued interest	455 97	Hobbs Brook Reservoir	182,619 92
Other revenue on Construction Accounts	693 99	Payson Park Reservoir	39,787 66
Rates, fines, etc	306,763 07	Maintenance	318,144 55
Supplies	6,054 33	Balance carried forward to credit of Water W'ks Construction $24,984 21	
Maintenance	1,344 96	Less deficit in Maintenance 3,526 22	21,457 99
	$656,040 99		$656,040 99

Recapitulation.

City Department Accounts.	Receipts.	Appropriations.	Expended.	Balances Unexpended.
Assessors' Department	.....	$13,552 25	$13,552 25	.....
Auditing Department	.....	3,500 00	3,489 04	$10 96
Bridge Department	$746 18	15,400 00	15,339 41	60 59
Cambridge Bridge	.....	*50,000 00	4,535 41	45,464 59
Cemetery Department	19,086 37	20,000 00	19,832 66	167 34
City Clerk Department	2,640 90	7,501 10	7,501 10	.....
Printing Town Records	.....	200 00	119 50	80 50
Russell Memorial Volume	.....	500 00	139 22	360 78
City Messenger Department	.....	2,860 00	2,859 04	96
Civil Service Department	.....	250 00	248 85	1 15
Clerk of Committees Department	.....	4,000 00	3,972 39	27 61
Contingent Fund	1,678 85	11,301 53	11,064 33	237 20
Election Expenses: —				
City Clerk	.....	5,312 37	5,312 37	.....
Registrars of Voters	.....	3,500 00	3,499 23	77
Superintendent of Public Buildings	10 00	2,100 00	2,049 87	50 13
Engineering Department	1,000 00	11,000 00	10,738 08	261 92
Assessors' Plans	.....	447 75	409 26	38 49
Executive Department	.....	5,200 00	5,184 26	15 74
Filling City Lands	.....	*4,900 00	3,492 75	1,407 25
Fire Department	108 75	80,200 00	80,152 89	47 11
Health Department	180 00	17,500 00	17,496 64	3 36
Inspection of Milk and Vinegar	170 00	1,500 00	1,499 56	44
Inspection of Provisions, etc	.....	800 00	798 12	1 88
Inspection of Wires	279 14	11,200 00	11,197 60	2 40
Interest	12,073 30	136,000 00	135,795 18	204 82
Lamp Department	30 23	69,200 00	69,182 20	17 80
Land Damages	.....	*30,420 75	14,376 22	16,044 53
Law Department	1,558 30	5,200 00	5,192 65	7 35
Overseers of the Poor Department:—				
Almshouse	1,315 59	21,000 00	20,962 34	37 66
Farm and Ledge	7,902 73	6,450 00	6,309 57	140 43
House Offal	7,264 09	26,000 00	25,871 38	128 62
Outside Aid	6,591 02	49,350 00	49,340 51	9 49
Salary of City Physician	.....	1,500 00	1,500 00	.....
Park Department: —				
Construction and Lands	2,175 07	*182,827 74	155,244 56	27,583 18
Maintenance	166 41	13,000 00	12,999 33	67
Interest	.....	34,570 00	34,570 00	.....
Sinking Fund	.....	14,375 00	14,375 00	.....
Plumbers' Examiners' Department	35 00	120 00	111 50	8 50
Police Department	6,082 76	117,000 00	116,762 59	237 41
Public Library: —				
Current Expenses	4,864 68	19,000 00	18,999 58	42
East Cambridge Branch	.....	1,080 00	1,078 80	1 20
Public Property: —				
City Buildings, Care and Repairs	5,684 13	22,000 00	21,821 23	178 77
Incidentals	.....	5,500 00	5,484 81	15 19
New School House, Ward Two	.....	*62,000 00	29,083 60	32,916 40
New School House, Ward Five	.....	*50,000 00	28,780 20	21,219 80
New Latin School House	.....	*148,606 38	88,937 16	59,669 22
Addition to Peabody School	.....	*42,000 00	24,541 76	17,458 24
Rifle Range	.....	200 00	51 00	149 00
School Houses, Care and Repairs	.....	60,000 00	59,929 17	70 83
School Department: —				
Care of Truants	.....	3,225 00	3,221 58	3 42
Flags	.....	450 00	212 80	237 20
Incidentals	.....	1,250 00	1,207 09	42 91
Salaries	2,284 27	273,050 00	273,036 97	13 03
Text-Books and Supplies	435 22	18,000 00	17,995 07	4 93
Sealer of Weights and Measures	502 09	1,600 00	1,598 46	1 54
Sewer Department: —				
Clay Lands	.....	*8,000 00	7,992 19	7 81
Construction, General	10,886 34	30,000 00	25,529 05	4,470 95
Maintenance	199 03	20,000 00	19,307 66	692 34
Sinking Funds				
Clay Lands	.....	3,500 00	3,500 00	.....
General	.....	100,437 50	100,437 50	.....
Harvard Bridge	.....	8,000 00	8,000 00	.....
Soldiers' Relief	8 00	3,700 00	3,462 75	237 25
State Aid	14,636 09	25,300 00	25,288 87	11 13
Stationery and Printing	1,177 53	2,953 14	2,869 03	84 11
Amounts carried forward	$111,772 07	$1,889,590 51	$1,659,443 19	$230,147 32

* Appropriation provided for by a Loan.

Recapitulation — Concluded.

City Department Accounts.	Receipts.	Appropriations.	Expended.	Balances Unexpended
Amounts brought forward	$111,772 07	$1,889,590 51	$1,659,443 19	$230,147 32
Street Department: —				
Bridges	.....	4,700 00	4,672 98	27 02
Cleaning Streets	.....	26,500 00	26,499 82	18
Collection of Ashes	.....	21,200 00	21,198 55	1 45
Construction of Streets in vicinity of Cambridge Field	.....	6,400 00	6,339 82	60 18
Maintenance	2,434 39	70,300 00	70,299 43	57
New Streets, Clay Land District	.....	*4,000 00	2,734 11	1,265 89
Paving, Edgestones and Sidewalks	22,276 64	35,265 00	35,264 25	75
Rebuilding Massachusetts Avenue	.....	20,000 00	20,000 00	.....
Watering Streets	17,321 47	24,500 00	24,414 78	85 22
Treasury Department	2,311 09	14,700 00	14,282 77	417 23
	$156,115 66	$2,117,155 51	$1,885,149 70	$232,005 81

Water Department Accounts.	Receipts.	Appropriations.	Expended.	Balances Unexpended.
Water Works Department: —				
Construction (General Account)	$1,174 73	*$30,000 00	$26,007 47	$3,992 53
Construction (Fresh Pond Land)	3,486 00	*63,000 00	62,288 57	711 43
Construction (Fresh Pond Reservoir)	.....	*8,000 00	5,734 83	2,265 17
Construction (Hobbs Brook Reservoir)	5,631 26	*187,000 00	182,619 92	4,380 08
Construction (Payson Park Reservoir)	2,595 00	*45,000 00	39,787 66	5,212 34
Maintenance (General Account)	1,344 96	61,700 00	60,576 85	1,123 15
Maintenance (Renewal of Main Pipe)	.....	18,900 00	15,534 91	3,365 09
Interest on Water Loan	455 97	124,950 00	124,854 00	96 00
Rates, Fines, etc	306,763 07	.....	.....	.....
Rates, Fines, etc. (Abatements)	.....	5,400 00	5,276 29	123 71
Rates, Fines, etc. (Refunds)	.....	3,200 00	3,163 74	36 26
Sinking Funds	.....	103,656 00	103,656 00	.....
Supplies	6,054 33	6,400 00	5,064 46	1,335 54
Supplies (Abatements)	.....	200 00	18 30	181 70
	$327,505 32	$657,406 00	$634,583 00	$22,823 00

* Appropriation provided for by a Loan.

City Treasury.

DR.

To Cash in Treasury, December 1, 1897	$81,817 76	
Receipts as shown in the foregoing Statement (City Department Accounts)	156,115 66	
Receipts as shown in the foregoing Statement (Water Department Accounts)	327,505 32	
Amount received from Collector of Taxes for 1898	1,269,596 86	
Amount received from Collector of Taxes for other years	226,443 80	
Betterments	370 55	
Cemetery Fund	3,089 20	
City Lands	414 25	
Commissioners of Sinking Funds	83,000 00	
Loan, City	4,900 00	
Loan, Clay Lands	10,000 00	
Loan, Latin School	141,000 00	
Loan, Parks	150,000 00	
Loan, School House	151,000 00	
Loan, Street	15,000 00	
Loan, Temporary	500,000 00	
Loan, Water (Registered)	300,000 00	
Park Betterments	24,280 64	
Park Betterment Lien	1,061 55	
Premium Account	23,737 50	
Tax, Corporation	74,081 41	
Tax, National Bank	16,602 89	
Trustees of Sinking Fund of Water Works	12,500 00	
		$3,572,517 39

CR.

By Amount expended as shown in the foregoing Statement (City Department Accounts)	$1,885,149 70	
Amount expended as shown in the foregoing Statement (Water Department Accounts)	634,583 00	
Abatements (Taxes)	27,566 98	
Cemetery Fund	3,089 20	
Loan, City Hall Land	83,000 00	
Loan, Temporary	500,000 00	
Loan, Water (Registered)	12,500 00	
Park Betterment Lien	24,488 08	
Tax Lien Account	3,601 50	
Tax, County	79,914 80	
Tax, Metropolitan Sewer	56,818 94	
Tax, National Bank	7,459 91	
Tax, State	48,195 00	
		$3,366,367 11
Balance in Treasury		$206,150 28

Schedule of Real Estate Owned by the City of Cambridge, as Shown on the Assessors' Books, Nov. 30, 1898.

Cambridge Cemetery: —			
60 1-10 acres of land		$60,000	
1 house		2,500	
			$62,500
Cambridge Public Library: —			
141,666 feet of land		70,000	
Library Building		116,000	
			186,000
Fire Department: —			
Hook and Ladder No. 2, Portland Street	$12,000		
11,931 feet of land	3,000		
		15,000	
Engine House No. 5, junction Cambridge and Hampshire Streets	10,000		
6,000 feet of land	5,000		
		15,000	
Police Station, Fourth Street	20,000		
4,220 feet of land	2,100		
		22,100	
Engine House, south side Main, corner Deacon Street	12,000		
9,400 feet of land	7,300		
		19,300	
Engine House, Massachusetts Avenue	23,000		
9,532 feet of land	6,000		
		29,000	
Engine House No. 4 and stable, North Ave.	7,000		
6,316 feet of land	3,000		
		10,000	
Engine House No. 6, River Street	12,000		
4,994 feet of land	2,500		
		14,500	
Engine House, east side Lexington Avenue	16,000		
15,262 feet of land	4,000		
		20,000	
Engine House, Massachusetts Avenue	26,000		
10,000 feet of land	8,000		
		34,000	
Engine House, Third Street	17,500		
10,100 feet of land	5,500		
		23,000	
			201,900
Overseers of the Poor Department: —			
14 242-1000 acres of land		15,000	
Almshouse buildings		25,000	
			40,000
Public buildings and lands: —			
City Hall, Massachusetts Avenue	200,000		
47,878 feet of land	72,000		
		272,000	
Ward One Building, Mt. Auburn Street	60,000		
16,153 feet of land	16,000		
		76,000	
Ward Four Building, Green Street	50,000		
13,028 feet of land	10,500		
		60,500	
Amount carried forward		$408,500	$490,400

Amounts brought forward		$408,500	$490,400
Public buildings and lands :—			
Stables, sheds and scales, Hampshire Street .	$16,000		
72,661 feet of land	30,000		
		46,000	
City Stables, west side Raymond Street .	27,000		
272,670 feet of land	11,000		
		38,000	
Park, Boylston, Mt. Auburn and Winthrop Streets, 10,236 feet of land		10,000	
Park, south side Broadway, 107,181 ft. land .		54,000	
Park, Hastings Square, 30,000 feet of land .		9,000	
Park, Dana Square, 33,531 feet of land . .		12,000	
Park, Pleasant Street, 1,372 feet of land .		1,000	
Park, Pleasant and River Streets, 1,569 feet of land		1,200	
Fort Washington, east side Waverly Street, 42,123 feet of land		8,000	
Mill Pond Property, north side River Street, west side Blackstone Street, 72,700 feet .		29,000	
Lot east side Portland Street, 18,011 feet .		5,500	
8 lots, east side Norfolk Street, 39,600 feet .		12,000	
42 lots, Western Avenue, Putnam Avenue, Bancroft, Gilmore, and Montague Streets, 120,710 feet		27,400	
Lot Second Street, 26,357 feet . . .		5,200	
Lot, west side Reed Street, 1,500 feet . .		100	
2 lots, Waldon Street, 16,365 feet . . .		1,600	
Flats, south side Main Street, 86,500 feet .		7,600	
Common, Garden, Massachusetts Avenue, and Waterhouse Streets, 370,785 feet . .		150,000	
Park, Massachusetts Avenue, Kirkland and Cambridge Streets, 33,357 feet . . .			
Park, Massachusetts Avenue and Harvard Square, 23,074 feet		77,000	
Park, Massachusetts Avenue and Holmes Place, 20,956 feet			
Park, Rindge Avenue and Groveland Streets 501,729 feet		30,047	
Lot, west side Blackstone Street, Western Avenue, and Ampere Streets, 19,934 feet .		5,600	
Mt. Auburn Street:—			
60, 508 feet of land		9,000	
Ward 2, Charles River Parkway, 453,475 feet		22,700	
Ward 3, Charles River Parkway, 359,300 feet		70,000	
Ward 4, Charles River Parkway, 2,180,889 ft.		86,500	
Ward 2, Cambridge Field, Shelter House .	28,000		
528,154 feet	22,000		
		50,000	
Lot, 171 Harvard Street, 16,109 feet . .		7,200	
Lot, south side Deacon Street, 12,210 feet .		1,000	
Triangular lot, Massachusetts Avenue and Arrow Street, 872 feet		800	
Burial ground, Massachusetts Avenue and Garden Street, 85,858 feet			
Triangular lot, Chauncy and Garden Streets, 3,189 feet		2,000	
Buildings and lands, north side Bridge . .		1,000	
			1,188,947
Amounts carried forward			$1,679,347

Amount brought forward			$1,679,347

SCHOOLHOUSES AND LANDS.

Ward One.

New Latin School	$150,000		
English High School, Broadway . . .	220,000		
154,125 feet of land	84,700		
		454,700	
Washington Grammar, Brattle Street . .	30,000		
14,951 feet of land	10,000		
		40,000	
Corlett Grammar, Holworthy Street . .	3,000		
10,000 feet of land	1,200		
		4,200	
Manual Training School, Broadway, Irving and Felton Streets		36,200	
Land, 73,128 feet			
Agassiz Primary, Sacramento Street . .	18,000		
19,689 feet of land	8,000		
		26,000	
Cushing Primary, Cushing Street . . .	3,000		
14,789 feet of land	1,500		
		4,500	
Dunster Primary, Concord Avenue . . .	4,000		
10,000 feet of land	3,000		
		7,000	
Holmes Primary, Hilliard Street . . .	6,000		
11,182 feet of land	5,600		
		11,600	
Lowell Primary, Lowell Street	7,000		
12,033 feet of land	3,600		
		10,600	
Quincy Primary, Mason Street	10,000		
8,469 feet of land	8,400		
		18,400	
Riverside Primary, Putnam Avenue . . .	5,000		
11,198 feet of land	3,000		
		8,000	
Russell School, Larch Street	40,000		
33,073 feet of land	5,000		
		45,000	

Ward Two.

Latin High, Fayette Street	$40,000		
37,828 feet of land	15,000		
		55,000	
Old Latin School, Lee Street	10,000		
10,100 feet of land	5,000		
		15,000	
Wellington Training, Columbia Street . .	16,000		
18,870 feet of land	5,700		
		21,700	
Allston Grammar, Boardman Street . .	18,000		
15,193 feet of land	4,600		
		22,600	
Harvard Grammar, Inman Street . . .	40,000		
20,494 feet of land	12,000		
		52,000	
Bridge Primary, Pioneer Street . . .	500		
4,646 feet of land	1,400		
		1,900	
Amounts carried forward		$834,400	$1,679,347

Amounts brought forward		$834,400	$1,679,347
Dana Primary, Centre Street	$2,000		
14,317 feet of land	4,300		
		$6,300	
Felton Primary, Amory Street	6,000		
15,090 feet of land	4,500		
		10,500	
Gannett (old) Primary, Columbia Street . .	2,000		
8,803 feet of land	2,500		
		4,500	
Gannett (new) Primary, Jefferson Street . .	12,000		
15,434 feet of land	3,000		
		15,000	
Sargent Primary, Broadway	3,000		
9,995 feet of land	4,000		
		7,000	
Stearns Primary, Harvard Street . . .	3,000		
10,050 feet of land	5,000		
		8,000	
Parker Primary, south side Broadway . .	15,000		
12,319 feet of land	7,000		
		22,000	
Ward Three.			
Putnam Grammar, Fourth and Otis Streets .	$60,000		
14,400 feet of land	9,800		
		69,800	
Thorndike Grammar, Thorndike Street . .	30,000		
10,027 feet of land	4,000		
		34,000	
Gore Primary, Gore Street	25,000		
9,900 feet of land	4,000		
		29,000	
Lassell Primary, Charles Street . . .	8,000		
10,000 feet of land	3,000		
		11,000	
Otis Primary, Otis Street	12,000		
8,270 feet of land	4,000		
		16,000	
Taylor School House	36,000		
23,592 feet of land	6,000		
		42,000	
Ward Four.			
Webster Grammar, Upton Street . . .	$50,000		
25,839 feet of land	9,000		
		59,000	
Boardman Primary, Winsor Street . . .	12,500		
10,018 feet of land	4,000		
		16,500	
Tarbell Primary, Grigg Street	8,000		
19,500 feet of land	4,000		
		12,000	
Willard Primary, Lake Street	20,000		
20,079 feet of land	5,000		
		25,000	
Morse School House, Allston and Brookline Streets	73,000		
25,650 feet of land	7,000		
		80,000	
Amounts carried forward		$1,302,000	$1,679,347

Amounts brought forward		$1,302,000	$1,679,347
Ward Five.			
Peabody Grammar, Linnæan Street . . .	$27,000		
21,813 feet of land	8,700		
		35,700	
Shepard Grammar, Massachusetts Avenue .	20,000		
14,755 feet of land	7,000		
		27,000	
Reed Primary, Reed Street	4,000		
12,000 feet of land	1,200		
		5,200	
Wyman Primary, Rindge Avenue . . .	6,000		
14,347 feet of land	4,000		
		10,000	
Sleeper School, Dudley Street	29,000		
21,284 feet of land	5,000		
		34,000	
East side Norris Street Schoolhouse lot, 25,700 feet of land		5,000	
			1,418,900
Sewer Department: —			
23,707 feet of land, Pilgrim Street . . .	5,900		
Stables, shed, house, and building . .	4,100		
			10,000
Water Works: —			
House, shop, and stables, south side Concord Avenue	4,000		
27 33-100 acres of land	16,700		
		20,700	
Land, south side Concord Avenue, 5-8 acre .		300	
Land, east side Woodlawn Avenue, 15,735 feet		800	
Lot, rear of Grove Street, 272,800 feet . .		2,000	
Lot, south side Concord Avenue, 99,000 feet .		1,000	
Land, south side Concord Avenue, 11,220 feet		100	
Two lots, south side Concord Avenue, 219,400 feet		2,200	
Gate-house lot, Concord Avenue, 43,560 feet		400	
Lot, south side Concord Avenue, 24,100 feet		300	
Fresh Pond Lane, 11 1-4 acres of land . .		11,000	
Kingsley Park, Fresh Pond Lane, 309,336 feet		8,000	
Lot, rear Fresh Pond Lane, 364,608 feet .		3,500	
Lot, Woodlawn Avenue, 107,616 feet . .		8,000	
Lot, Woodlawn Avenue, 26,989 feet . .		1,600	
Lot, rear Fresh Pond Lane, 239,541 feet .		5,000	
Lot, Woodlawn Avenue, 91,040 feet . .		2,000	
Lot, Holworthy Street, 18,480 feet . . .			
Lot, south side Huron Avenue, 22,348 feet .		700	
Lot, east side Cushing Street, 41,053 feet .		800	
Lot, Cushing Street, corner Woodland Avenue, 95,482 feet		2,000	
Lot, Woodland Avenue, 24,096 feet . .		1,900	
Lot, east side Cushing Street, 222,750 feet Lot, east side Cushing Street, 416,800 feet		4,000	
Two lots, near Fresh Pond and Adams Place, 110,891 feet		1,000	
Land, Adams Place, 55,275 feet, 105,322 feet .		1,400	
Lot, Woodlawn Avenue, 25,216 feet of land .		1,200	
Land, Woodlawn Avenue, 133,336 feet . .		13,700	
Gravel pit, south side Concord Avenue, 397,417 feet		3,000	
Amounts carried forward		$96,600	$3,108,247

Amounts brought forward		$96,600	$3,108,247
Water Works: —			
190,500 feet of land, Huron Avenue		4,300	
Lot, south side Huron Avenue, 91,112 feet		500	
Near Concord Avenue, 4½ acres		5,000	
Adams Place, 419, 222 feet of land		10,000	
South side Concord Avenue, 10,805 feet of land		500	
South side Concord Avenue, 32,425 feet of land		700	
South side Concord Avenue, 62,000 feet of land		1,200	
Lot, Huron Avenue, 1¾ acres		1,000	
Concord Avenue, 294,000 feet of land		3,000	
Tudor Park, near Concord Avenue, 57,312 feet of land			
Pumping Station, Worthington Street	$50,000		
Dwelling house	2,000		
90,414 feet of land	18,000		
		70,000	
One house and stable, Lexington Avenue, Lake View Avenue, and Vassal Lane	7,300		
88,077 feet of land	11,000		
		18.300	
Reservoir, Reservoir Street, 91,003 feet of land		27,000	
Two houses, stable and sheds and building, south side Auburn Street	5,700		
33,847 feet of land	6,600		
		12,300	
Lot, Grove Street, 150,000 feet		1,500	
Land and buildings, Grove Street, 519,000 feet		11,000	
Lot, Fresh Pond Lane, corner Huron Avenue, 46,479 feet		6,900	
Lot, Fresh Pond Lane, 209,500 feet		20,000	
			289,800
Total			$3,398,047

Exempted Property.

The following is a schedule of property used for religious, charitable and educational purposes, and exempt from taxation by law, not including that owned by the City of Cambridge, as shown on the Assessors' Books, November 30, 1898.

Ward One.

Christ Church, Episcopal, Garden St.:		
Church	$18,000 00	
22,701 feet of land	17,000 00	
		$35,000 00
First Parish Church, Unitarian: —		
Church, Massachusetts Avenue	20,000 00	
14,764 feet of land	22,000 00	
		42,000 00
Cambridge Social Union: —		
Personal property	1,500 00	
House, No. 42 Brattle Street	5,000 00	
13-22 of hall	7,000 00	
9,030 feet of land	9,000 00	
		22,500 00
Amount carried forward		$99,500 00

Amount brought forward . . .		$99,500 00
Epworth Methodist Episcopal Church:		
Church, Massachusetts Avenue .	$80,000 00	
11,248 feet of land	10,000 00	
		90,000 00
Old Cambridge Baptist Society:—		
Church, Massachusetts Avenue and Harvard Street	86,000 00	
34,573 feet of land	27,000 00	
		113,000 00
Shepard Congregational Society:—		
Church, Garden Street . . .	110,000 00	
34,353 feet of land	34,000 00	
		144,000 00
St. Peter's Roman Catholic:—		
Church, Concord Avenue . . .	45,000 00	
33,700 feet of land	10,000 00	
		55,000 00
St. Paul's Roman Catholic:—		
Church, Mount Auburn Street . .	30,000 00	
11,216 feet of land	11,000 00	
		41,000 00
St. Paul's Catholic School Association:		
Personal property	1,500 00	
School building	55,000 00	
House, Arrow and Mount Auburn Streets	8,000 00	
31,800 feet of land	19,000 00	
		83,500 00
Cambridge Hospital:—		
Personal property	169,637 56	
Building, Mount Auburn Street .	78,000 00	
411,452 feet of land	123,000 00	
		370,637 56
Cambridge Home for Aged People, Mount Auburn Street:—		
39,377 feet of land		16,000 00
Longfellow Memorial Association:—		
Personal property	16,862 77	
Park, south side Brattle Street, 93,618 feet	56,000 00	
		72,862 77
Episcopal Theological School, Trustees of:—		
Personal property	122,718 90	
Chapel, seminary, dormitories, Brattle and Mason Streets, and Hastings Avenue	238,471 82	
		361,190 72
Avon Home, Mt. Auburn Street:—		
Building	22,000 00	
69,470 feet of land	20,000 00	
Personal property	45,140 45	
		87,140 45
Holy Ghost Hospital for Incurables:—		
Building, Cambridge Street . .	35,500 00	
209,126 feet of land	54,500 00	
		90,000 00
Radcliffe College:—		
Personal property	439,913 18	
Amount carried forward . . .		$1,623,831 50

Amount brought forward . . .		$1,623,831 50	
Radcliffe College: —			
Five houses, laboratory, schoolhouse and gymnasium, Garden, Brattle, Mason and James Streets	$66,700 00		
100,262 feet of land	99,300 00		
		$605,913 18	
The Corporation of the New Church Theological School: —			
Personal property	63,978 00		
Two houses and stable, 42–48 Quincy Street	16,000 00		
81,450 feet of land	65,000 00		
		144,978 00	
President and Fellows of Harvard College: —			
Personal property	6,539,054 34		
Dormitories, chapels, laboratories, museums, lecture rooms and houses, including Ward Five property	3,070,550 00		
		9,609,604 34	
Commonwealth of Massachusetts: —			
Metropolitan Park, 29 acres and 120,294 feet		21,200 00	
			$12,005,527 02
Ward Two.			
Baptist Church, Trustees of funds of: —			
Chapel, Hampshire Street . .	$3,000 00		
2,500 feet of land	800 00		
		$3,800 00	
Broadway Baptist Church: —			
Church, west side Boardman Street .	30,000 00		
11,620 feet of land	8,000 00		
		38,000 00	
Cambridgeport Unitarian Society: —			
Church, north side Austin Street .	18,000 00		
13,116 feet of land	8,000 00		
		26,000 00	
Harvard Street Methodist Episcopal Society: —			
Church, north side Harvard Street .	22,000 00		
10,030 feet of land	8,000 00		
		30,000 00	
St. Paul's African M. E. Church: —			
Church, north side Hastings Street .	2,000 00		
5,386 feet of land	2,000 00		
		4,000 00	
Hope Congregational Church: —			
Church, north side Harvard Street .	8,000 00		
6,000 feet of land	3,000 00		
		11,000 00	
First Evangelical Congregational Society: —			
Church, west side Prospect Street .	40,000 00		
19,513 feet of land	12,000 00		
		52.000 00	
First Free Baptist Church: —			
Church, north side Harvard Street .	9,000 00		
6,250 feet of land	4,700 00		
		13,700 00	
Amounts carried forward . . .		$178,500 00	$12,005,527 02

Amounts brought forward . . .		$178,500 00	$12,005,527 02
First Universalist Society of Cambridge: —			
Church, east side Inman Street .	$20,000 00		
15,312 feet of land	11,300 00		
		31,300 00	
St. Mary's Parochial School: —			
Church, west side Norfolk, corner Harvard Street	45,000 00		
Girls' School, south side Harvard Street	60,000 00		
Boys' School, east side Essex Street	18,000 00		
Sisters' Home, 50 and 52 Essex Street	7,000 00		
49,928 feet of land	20,000 00		
Theatre, east side Norfolk Street .	15,000 00		
13,032 feet of land	6,500 00		
Gymnasium, east side Prospect Street	35,000 00		
11,370 feet of land	5,600 00		
House, 121 Norfolk Street . .	7,500 00		
7,500 feet of land	2,300 00		
		221,900 00	
Cambridge Home for Aged People, 183 Hancock Street: —			
Personal property	37,682 22		
12,094 feet of land	6,000 00		
One house	7,000 00		
		50,682 22	
First Reformed Presbyterian Church, west side Antrim Street . .	7,000 00		
5,000 feet of land	2,000 00		
		9,000 00	
St. Bartholomew's Church, west side Columbia Street	6,000 00		
5,075 feet of land	1,500 00		
		7,500 00	
First United Presbyterian Church: —			
Church, south side Cambridge Street	6,000 00		
9,173 feet of land	4,600 00		
		10,600 00	
Holy Ghost Hospital for Incurables, Cambridge Street: —			
72,310 feet of land		10,000 00	
			519,482 22
Ward Three.			
Trinity Methodist Episcopal Church: —			
Church, Cambridge, corner Third Street	$25,000 00		
6,500 feet of land	16,300 00		
		41,300 00	
Massachusetts Baptist Convention, Trustee: —			
Church, Cambridge and Fourth Streets	25,000 00		
6,000 feet of land	11,000 00		
		36,000 00	
Mission of the Ascension: —			
Church, Third and Thorndike Streets	5,000 00		
4,800 feet of land	4,000 00		
		9,000 00	
Amounts carried forward . . .		$86,300 00	$12,525,009 24

Amounts brought forward . . .		$86,300 00	$12,525,009 24
Second Universalist Society: —			
Church, Otis Street	$16,000 00		
5,950 feet of land	3,500 00		
		19,500 00	
Church of the Sacred Heart: —			
Church, Sixth, Otis and Seventh Streets	70,000 00		
18,400 feet of land	7,400 00		
		77,400 00	
St. John's Church: —			
Church, east side Fourth . . .	5,000 00		
7,005 feet of land	4,200 00		
		9,200 00	
County of Middlesex: —			
Court House, Third, Otis and Thorndike Streets	70,000 00		
Registry of Deeds, Second, Otis and Third Streets	175,000 00		
59,572 feet of land	36,000 00		
		281,000 00	
Registry of Deeds (new): —			
Cambridge, Otis, Second and Third Streets	200,000 00		
59,380 feet of land	60,000 00		
		260,000 00	
House of Correction, jail and shops, Thorndike, Third, Spring and Second Streets	250,000 00		
59,880 feet of land	24,000 00		
		274,000 00	
St. John's Literary Institute: —			
Hall and stores, Cambridge Street, two-thirds value	20,000 00		
½ of 6,300 feet of land . . .	4,700 00		
Cash assets	2,878 21		
		27,578 21	
			1,034,978 21
Ward Four.			
Cambridge Young Men's Christian Association: —			
Personal property	$23,699 01		
New building, Massachusetts Avenue	100,000 00		
24,145 feet of land	12,000 00		
		135,699 01	
Immanuel Baptist Church: —			
Church, east side Magazine Street .	25,000 00		
11,250 feet of land	3,000 00		
		28,000 00	
First Baptist Society: —			
Church, Central Square . . .	80,000 00		
21,400 feet of land	20,000 00		
		100,000, 00	
First Church of the Evangelical Association of North America: —			
Church, 44 William Street . .	5,000 00		
6,750 feet of land	2,700 00		
		7,700 00	
First Swedish Baptist Church of Cambridge: —			
1 house, 77 Columbia Street . .	2,000 00		
Amounts carried forward . . .	$2,000 00	$271,399 01	$13,559,987 45

Amounts brought forward . . .	$2,000 00	$271,399 01	$13,559,987 45
First Swedish Baptist Church of Cambridge: —			
2,765 feet of land	1,200 00		
		3,200 00	
Grace Methodist Episcopal Church: —			
Church, east side Magazine Street .	15,000 00		
7,750 feet of land	5,000 00		
		20,000 00	
Massachusetts Baptist Convention — Union Baptist Church: —			
Church, 874 Main Street . . .	10,000 00		
3,900 feet of land	2,800 00		
		12,800 00	
Pilgrim Congregational Church: —			
Church, west side Magazine Steeet .	30,000 00		
8,885 feet of land	7,500 00		
1,800 feet of land	1,200 00		
		38,700 00	
Baptist Home, 80 Chestnut Street, and 308 Brookline Street, one house and stable	11,500 00		
Personal property	7,973 18		
21,300 feet of land	10,000 00		
		29,473 18	
The Lamson Home, 322 Brookline Street, one house	5,000 00		
5,000 feet of land	2,000 00		
Personal property	7,827 20		
		14,827 20	
Mount Olive Baptist Church, south side State Street: —			
5,000 feet of land		2,500 00	
Protestant Episcopal Church, Trustees of Donations to: —			
Church, south side Massachusetts Avenue (St. Peter's) . . .	10,000 00		
9,229 feet of land	9,200 00		
		19,200 00	
East End Union Mission: —			
Church, west side Brewery Street, on Rogers' land		3,500 00	
Rush African M. E. Zion Church: —			
Church, south side School Street .	6,000 00		
2,760 feet of land	1,100 00		
		7,100 00	
St. Philip's Church, Episcopal: —			
Church, north side Allston Street .	3,000 00		
4,646 feet of land	1,200 00		
		4,200 00	
Wood Memorial Church, Congregational: —			
Church, west side Columbia, corner Austin Street	30,000 00		
7,500 feet of land	4,000 00		
		34,000 00	
Prospect Union Association: —			
Personal property	10,190 44		
Building, 744 Massachusetts Avenue.	6,700 00		
11,449 feet of land	7,200 00		
		24,090 44	$484,989 83
Amount carried forward . . .			$14,044,977 28

Amount brought forward . . .			$14,044,977 28
Ward Five.			
Catholic Cemetery, Rindge Avenue			
304,014 feet of land . . .		$30,000 00	
North Avenue Congregational Society: —			
Church, Massachusetts Avenue .	30,000 00		
13,430 feet of land	8,000 00		
		38,000 00	
Porter's Station Depot, Massachusetts Avenue, Fitchburg Railroad Company		2,000 00	
Third Universalist Society: —			
Church, Massachusetts Avenue .	30,000 00		
14,880 feet of land	9,000 00		
		39,000 00	
St. James' Episcopal Society: —			
Church and chapel, Massachusetts Avenue and Beech Street . .	75,000 00		
21,207 feet of land (cemetery lot included)	12,700 00		
		87,700 00	
Abbott, Edward, Trustee for, west side Beech Street: —			
Lot, 7,965 feet of land . . .		3.200 00	
North Avenue Baptist Society: —			
Church, Massachusetts Avenue .	55,000 00		
38,525 feet of land	15,000 00		
		70,000 00	
Williams, John J., south side Rindge Avenue: —			
Schoolhouse	40,000 00		
20,220 feet of land	4,000 00		
		44,000 00	
Marist Fathers of Boston, French Roman Catholic Church: —			
Church, north side Harvey Street .	40,000 00		
14,645 feet of land	3,000 00		
		43,000 00	
Weymouth, Harrison G. O. (disabled soldier)			
Orchard Street, 4,800 feet of land .		1,900 00	
			$358,800 00
			$14,403,777 28

REPORT OF THE COMMITTEE ON ACCOUNTS

CAMBRIDGE, December 15, 1898.

To the Honorable the City Council:—

As required by Section 4 of Chapter 4 of the City Ordinances, the Committee on Accounts herewith presents its annual report for the year 1898.

The Committee has frequently met and made the required examination of the City Auditor's books and accounts. These have been very accurately and neatly kept, and all the business of the department has been conducted with the highest satisfaction to the Committee as well as to the public.

EBEN H. GOOGINS,
ISAAC McLEAN,
EDGAR P. BAKER,
JAMES T. BARRETT,
WILLIAM M. WADDEN

Committee on Accounts.

REPORT OF THE COMMITTEE ON FINANCE

The Committee on Finance for the year 1898 herewith submits its annual report.

The annual financial estimates as recommended by the Committee in February last, were in the aggregate as follows:

Appropriations and Revenue, 1898.

TOTAL ESTIMATE OF REVENUE.

City Department accounts	$150,845 00	
Water Department accounts	324,500 00	
Other revenue and cash in Treasury December 1, 1897	361,817 76	
Grand total		$837,162 76

TOTAL AMOUNT OF APPROPRIATIONS REPORTED.

City Department accounts	$2,007,077 37	
Water Department accounts	619,406 00	
Grand total		$2,626,483 37

GENERAL RECAPITULATION.

Total estimates as before stated	$2,626,483 37	
Allowance for estimated uncollected taxes of the year 1897, remaining uncollected as of November 30, 1897	200,000 00	
		$2,826,483 37
Less estimated revenue before given		837,162 76
Balance to be provided for		$1,989,320 61

The Committee recommended that this amount be provided for as follows:

1.	By the issue of City Bonds, viz.:		
	Schoolhouse Loan	$295,000 00	
	Street Loan (land damages)	15,000 00	
			$310,000 00
2.	By issue of Clay Land Loan Bonds		10,000 00
3.	By issue of Park Loan Bonds		110,000 00
4.	By issue of Water Loan Bonds		265,000 00
5.	By assessment upon polls and estates of the inhabitants of Cambridge, etc., for the current year, being the amount required for municipal expenses for the year		1,294,320 61
			$1,989,320 61

CITY OF CAMBRIDGE.

IN COMMON COUNCIL, February 15, 1898.

Ordered, That the sum of *One Million Two Hundred and Ninety-four Thousand Three Hundred and Twenty Dollars and Sixty-one cents* ($1,294,320.61) be raised upon the polls and estates of the inhabitants of the City of Cambridge,

and the estates of non-resident proprietors, according to law, to defray the current expenses of the City for the financial year beginning December 1, 1897, and ending November 30, 1898.

CITY OF CAMBRIDGE.

IN COMMON COUNCIL, February 15, 1898.

Ordered, That the sums following be and are hereby appropriated toward defraying the expenses of the City of Cambridge for the financial year beginning December 1, 1897 and ending November 30, 1898.

Total amount of appropriations as recommended by the Committee	$2,626,483 37

The figures as reported by the Committee were changed by the City Council as follows:—

CITY DEPARTMENT ACCOUNTS.

Park Department, Construction: $140,327.74 increased to $143,827.74	$2,500 00
Street Department: Building streets in the vicinity of Cambridge Field	9,900 00
	$12,400 00

CITY DEPARTMENT ACCOUNTS (DECREASE).

Interest account, reduced from $145,000.00 to $137,000.00	$8,000 00
Net increase of appropriation for city department accounts	$4,400 00

The several orders relative to the appropriations were amended in accordance with the foregoing.

The item of $15,000 00 for Fresh Pond Reservoir in the Water Department appropriation was stricken out.

Various additions were made to these appropriations, and several special appropriations were made from time to time recommended by the Committee, full details of which are given in the report of the City Auditor.

The usual Sub-Committee, which consisted of Aldermen Watson G. Cutter and John J. Ahern, with Councilman Hans L. Carstein, was appointed to examine the condition of the City Treasury at the close of business on Wednesday, November 30, 1898.

The Sub-Committee submitted the following report:—

CITY OF CAMBRIDGE, December 20, 1898.

To the Committee on Finance:—

GENTLEMEN:—The Sub-Committee appointed to count and examine the cash in the hands of the City Treasurer at the close of business on November 30, 1898, would respectfully report:—

November 30, 1898. Actual cash and business checks in City Treasurer's office amounted to		$16,053 47
Also a certificate from W. F. Earle, Cashier of the First National Bank of Cambridge, Mass., showing a balance (at close of business, November 30, 1898) to the credit of the City Treasurer, of	$181,369 15	
From this balance should be deducted the following Treasurer's checks, not presented to Bank for pay-		
Amount carried forward		$16,053 47

Amount brought forward	$16,053 47	
ment; Nos. 12,063, 12,119 and 12-186, amounting to	868 75	
Making a net balance in above Bank of . .	180,500 40	
Also a certificate from Geo. A. Lloyd, Cashier of the Lechmere National Bank of Cambridge, Mass., showing a balance (at close of business November 30, 1898) to the credit of the City Treasurer of	10,000 00	
Also a certificate from Louis W. Cutting, Treasurer of the Cambridge Safe Deposit and Trust Company, of Cambridge, Mass., showing a balance (at close of business November 30, 1898) to the credit of the City Treasurer of .	50,273 72	
Making the total cash on hand		$256,827 59
December 20, 1898. After the above examination by your Committee, certain additional entries belonging to the financial year 1898, were made, the receipts and expenditures which these same represent being as follows:—		
RECEIPTS.		
Account of Police Department, Minors' licenses .	$40 75	
Account of Stationery and Printing, Supplies to Departments	247 48	
Account of Public Property, City Buildings, Armory rents	700 00	
From Commonwealth of Massachusetts:—		
Account of Corporation Tax	67,819 81	
Account of National Bank Tax, being amount received for stocks of Massachusetts Banks outside of Cambridge, owned by Cambridge residents	16,402 37	
Account of State Aid	14,143 18	
Account of taxes 1898, additional to entry of November 30, but not previously reported .	21,774 04	
A total of		$121,127 63
Which amount added to City Treasurer's balance of November 30, 1898, as above, makes a total of		$377,955 22
EXPENDITURES.		
Authorized additional payments as of November 30, 1898, verified by your Committee are as follows:—		
Paid Commonwealth of Massachusetts:—		
Account of Metropolitan Sewer Tax; being annual assessment of Interest, Maintenance and Sinking Fund charges on account of Metropolitan Sewer	$56,818 94	
Account of National Bank Tax, being refund of Taxes on non-resident owners of stock in Cambridge Banks	7,459 91	
Account of State Tax, being assessment for year 1898	48,195 00	
Account of City Hall Land Loan, being amount held by the City Treasurer to pay bond No. 68, of this loan, maturing August 1, 1898, but not yet presented for payment	1,000 00	
Amounts carried forward	$113,473 85	$377,955 22

Amounts brought forward	$113,473 85	$377,955 22
Account of Abatement-Taxes, being Assessors' certificates received and paid on account of taxes 1898 as per additional entry of November 30, 1898	571 20	
A total of		$114,045 05
Which deducted from the foregoing total of receipts shows a balance in the City Treasurer's hands as of November 30, 1898, of . . .		$263,910 17

Your Committee would further state that we carefully examined the total cash receipts for the financial year of 1898, as of the City Treasurer's books, and find the same to be as follows: —

Total cash receipt from all sources for the year ending November 30, 1898, as per City Treasurer's Ledger	$3,490,699 63	
To this should be added cash balance of November 30, 1897	155,833 28	
A total of		$3,646,532 91
Total cash expenditures for the year ending November 30, 1898, as per City Treasurer's Ledger, the same authorized by sundry drafts of the Mayor, which your Committee examined . .		3,382,622 74
Which amount deducted from the above total shows a cash balance as of November 30, 1898. verified by our above report of examination, of		$263,910 17

The Sub-Committee were enabled to further verify the above statement of receipts and expenditures, by comparison with the City Auditor's statement for December, 1898.

WATSON G. CUTTER,
JOHN J. AHERN,
HANS L. CARSTEIN,
} *Sub-Committee.*

The foregoing report being intended to embrace only a brief statement in reference to such financial doings of the City Council, as were carried forward under the recommendations of this Committee, all details of figures have been avoided as properly belonging to the report of the City Auditor. Many important matters have been under consideration before the Committee, several of which, relating to extensive public improvements, are still pending.

RUSSELL BRADFORD,
WATSON G. CUTTER,
WARREN F. SPALDING,
JOHN J. AHERN,
GEORGE E. SAUNDERS,
HAMILTON H. PERKINS,
JOHN E. SMITH,
WILLIAM F. BROOKS,
JAMES J. SCULLY,
HANS L. CARSTEIN,
} *Committee on Finance.*

REPORT OF THE CITY TREASURER

OFFICE OF CITY TREASURER, December 1, 1898.

To the Honorable the City Council :—

In the following pages I submit a detailed report of the receipts and expenditures of the public funds by the Treasury Department, during the year ending November 30, 1898, including an account of all bonded and temporary loans negotiated in said year; also a detailed account of official fees received, and a report on the Cemetery Fund.

Very respectfully,

WM. W. DALLINGER,
City Treasurer.

CITY OF CAMBRIDGE IN ACCOUNT CURRENT FROM DECEMBER 1, 1897, TO

Dr.

To authorized payments charged to City Accounts: —	
Abatements — Taxes	$27,566 98
Assessors' Department	13,550 08
Auditing Department	3,477 12
Bridge Department	14,268 55
Cambridge Bridge	3,970 67
Cemetery Department	20,175 49
Cemetery Fund	3,089 20
City Clerk's Department	7,455 80
City Clerk's Department — Printing Town Records	50 00
City Messenger's Department	2,863 28
Civil Service Department	238 90
Clerk of Committees Department	3,948 25
Contingent Fund	11,072 38
Election Expenses: —	
City Clerk	5,040 84
Registrars of Voters	3,592 40
Superintendent of Buildings	1,505 13
Engineering Department	10,817 17
Engineering Department — Assessors' Plans	409 26
Executive Department	5,206 58
Filling City Lands	3,492 75
Fire Department	80,563 92
Health Department	17,510 87
Inspection of Milk and Vinegar Department	1,567 27
Inspection of Provisions Department	765 31
Inspection of Wires Department	11,727 54
Interest	135,795 18
Lamp Department	69,197 55
Land Damages: —	
Boylston Street	9,258 90
Dunster Street	2,451 00
Eliot Street	2,028 00
General	129 45
Huron Avenue	31 50
Magee Street	477 37
Law Department	5,292 14
Loan: —	
City Hall Land	83,000 00
Temporary	500,000 00
Water	12,500 00
Overseers of the Poor Department: —	
Almshouse	20,860 91
Farm and Ledge	6,313 06
House Offal	25,713 16
Outside Aid	47,059 89
Salary City Physician	1,500 00
Park Betterment Lien Account	24,488 08
Park Department: —	
Construction and Lands	169,938 01
Interest on Park Loan	34,570 00
Maintenance	13,153 22
Sinking Fund	14,375 00
Plumbers' Examiners Department	116 40
Police Department	116,439 66
Public Library Department: —	
Current Expenses	18,086 84
East Cambridge Branch	1,140 57
Public Property: —	
City Buildings	21,371 77
Incidentals	5,449 18
School Houses	56,449 90
New Latin Schoolhouse	89,273 16
New Schoolhouse and Land, Ward 2	29,083 60
New Schoolhouse, Ward 5	28,780 20
Peabody School Addition	24,541 76
Schoolhouse, Ward 1, Furniture	167 20
Shooting Range	52 12
School Department: —	
Care of Truants	3,473 58
Flags	242 88
Incidentals	1,061 71
Salaries	271,524 97
Text-books and Supplies	17,377 38
Amount carried forward	$2,116,691 04

NOV. 30, 1898 (INCLUSIVE), WITH WM. W. DALLINGER, CITY TREASURER.

Cr.

By Receipts as follows: —	
Betterments — Eliot Street	$370 55
Bridge Department	746 18
Cemetery Department	19,086 37
Cemetery Fund	3,089 20
City Clerk's Department	2,640 90
City Lands	414 25
Commissioners of Sinking Funds	83,000 00
Contingent Fund	1,678 85
Election Expenses — Superintendent of Buildings	10 00
Engineering Department	1,000 00
Fire Department	108 75
Health Department	180 00
Inspection of Milk and Vinegar Department	170 00
Inspection of Wires Department	279 14
Interest	12,073 30
Lamp Department	30 23
Law Department	1,558 30
Loan: —	
Charles River Improvement	50,000 00
City	4,900 00
Clay Land	10,000 00
Park	100,000 00
School House	292,000 00
Street	15,000 00
Temporary	500,000 00
Water	300,000 00
Overseers of the Poor Department: —	
Almshouse	1,315 59
Farm and Ledge	7,902 73
House Offal	7,264 09
Outside Aid	6,591 02
Park Betterments	24,280 64
Park Betterment Lien Account	1,061 55
Park Department: —	
Construction and Lands	2,175 07
Maintenance	166 41
Plumbers' Examiners Department	35 00
Police Department	6,082 76
Premium Account	23,737 50
Public Library Department — Current Expenses	4,864 68
Public Property — City Buildings	5,684 13
School Department —	
Salaries	2,284 27
Text-books and Supplies	435 22
Sealer of Weights and Measures	502 09
Sewer Department: —	
Construction	10,886 34
Maintenance	199 03
Soldiers' Relief	8 00
State Aid	14,636 09
Stationery and Printing	1,177 53
Street Department: —	
Maintenance	2,434 39
Paving	22,276 64
Watering	17,321 47
Tax: —	
Corporation	74,081 41
National Bank	16,602 89
Taxes: —	
1891	2 00
1892	34 80
1893	255 84
1894	420 04
1895	1,306 88
1896	4,726 77
1897	219,697 47
1898	1,269,596 86
Treasury Department	2,311 09
Trustees of Sinking Fund of Water Works	12,500 00
Amount carried forward.	$3,163,194 31

CITY OF CAMBRIDGE IN ACCOUNT CURRENT FROM DECEMBER 1, 1897, TO

Dr.

Amount brought forward	$2,116,691 04
Sealer of Weights and Measures	1,641 61
Sewer Department: —	
Clay Land Sewers	7,967 69
Construction — General	23,353 59
Maintenance	18,981 30
Sinking Fund Department: —	
Clay Lands	3,500 00
General	100,437 50
Harvard Bridge	8,000 00
Soldiers' Relief	3,457 75
State Aid	25,144 06
Stationery and Printing	2,872 84
Street Department: —	
Bridges	4,693 31
Clay Land Streets	1,075 23
Cleaning Streets	26,522 61
Collection of Ashes	21,598 42
Construction: —	
Streets in vicinity of Cambridge Field	6,339 82
Eliot Street	385 13
Magee Street	613 79
Maintenance	71,037 52
Paving	43,790 82
Rebuilding Massachusetts Avenue	20,452 39
Watering	25,416 78
Tax: —	
County	79,914 80
Metropolitan Sewer	56,818 94
National Bank	7,459 91
State	48,195 00
Tax Lien Account	3,601 50
Treasury Department	14,375 30
Water Works Department: —	
Construction: —	
General Account	25,663 82
Fresh Pond Land	62,274 95
Fresh Pond Reservoir	5,131 02
Hobbs Brook Reservoir	183,404 54
Payson Park Reservoir	40,826 18
Interest on Water Loan	124,854 00
Maintenance: —	
General Account	60,935 02
Office Expenses	25 60
Pumping	2,360 35
Renewal of Mains	15,397 88
Stony Brook Reservoir	60 94
Rates, Fines, etc.: —	
Abatements	5,276 29
Refunds	3,163 74
Sinking Funds	103,656 00
Supplies	5,235 46
Supplies — Abatements	18 30
Total Payments	$3,382,622 74
Cash Balance in Treasury, Nov. 30, 1898	263,910 17
	$3,646,532 91

NOV. 30, 1898 (INCLUSIVE), WITH WM. W. DALLINGER, CITY TREASURER.

Cr.

Amount brought forward	$3,163,194 31
Water Works Department: —	
Construction: —	
General Account	1,174 73
Fresh Pond Land	3,486 00
Hobbs Brook Reservoir	5,631 26
Payson Park Reservoir	2,595 00
Interest on Water Loan	455 97
Maintenance — General Account	1,344 96
Rates, Fines, etc.	306,763 07
Supplies	6,054 33
Total Receipts	$3,490,699 63
Cash Balance in Treasury, November 30, 1897	155,833 28
	$3,646,532 91

Temporary Loans.

Temporary loans—or loans in anticipation of the taxes of the current year—have, for a good many years, been one of the necessary parts of our municipal finance. Every year we expend from $7,000 to $10,000 in interest on these loans. Almost immediately upon the inauguration of a new government, the order goes in giving the City Treasurer authority to borrow money to be paid when the taxes of the year come in, say in October. Our financial year begins December 1, and in January following we begin to borrow.

It does not seem right to have this condition exist, but it does exist.

It has always seemed to me that the tax of a certain year assessed as of May 1 and made payable in the autumn of the same year, was intended to be paid into the municipal treasury in its entirety before the year closed. One evidence of such intention on the part of our law-makers, is found in the annual requirement of the state, which compels the towns and cities to pay into the state and county treasuries the whole amount levied for a State and County tax before the end of the year. These State and County taxes are never fully collected, but the municipality must advance the uncollected part from its own funds. From ten to fifteen per cent of our tax levy remains unpaid at the close of our financial year. The municipality, it seems to me, should have its own funds to meet its own obligations. It should not be expected to furnish capital for private enterprise. It is, in a measure, because the city does not receive "its own," that it is forced to borrow at almost the beginning of the year. It cannot be that even the most paternal government, when it levies taxes for its own maintenance, should be denied those taxes from the smaller fraction of its tax-payers.

Municipalities were not created to be lenders. Modern exigencies in varied form, however, force them to be persistent borrowers.

Bonded Loans.

Your treasurer has been directed by sundry orders, to bargain and sell seven different kinds of loans, amounting in aggregate to $771,900, an increase over the year 1897, when $685,500 were sold.

The first sale was made very early in the year, December 15, 1897, and was an advertised one, being $140,000 of 20 year 3½ per cents.

One hundred thousand dollars were sold to the highest bidder, upon a 3.20 basis and $40,000 to the Trustees of the Water Loan Sinking Fund, upon the same basis. In the early spring months the prospects of war between our country and Spain, very naturally made the market for bonds very forbidding. There was capital in great abundance, seeking investment, but the nerve to lend it seemed lacking. This condition of the money market occurred, moreover, when the construction work of our different departments was being prosecuted with energy, and money was constantly needed for the work.

To test the market, on the 26th of April, I advertised for bids for $245,000 of our 20 year 3½ per cents, with the most remarkable result of not receiving a bid.

Thenceforward, for a considerable time, loans were negotiated without advertisement. Being in daily communication with bankers, I gathered their opinions, which seemed unanimous, that Cambridge could not sell a 3½ per cent bond at par; that we had better issue a four per cent., for which we might receive a very small premium. Providence and Worcester were cited as having issued four per cents earlier in the year; why should not Cambridge do the same?

While these ideas and opinions were being considered, a private capitalist appeared, who was willing to purchase $100,000 of our 20 year 3½ per cents at par, and they were sold to him.

With the exception of $6,900 sold to the different Trust funds of the city, this sale of $100,000 was the only one made at par. For the remaining loans a premium was received, as indicated in the table hereto appended. Considering that the City Council thought it necessary to issue so large a bonded loan as $771,900, taken in connection with the condition of the money market in the earlier half of the year, to have sold our bonds upon an average interest basis of 3.244 per cent, should afford us a reasonable degree of satisfaction.

It is proper to state in closing this subject that the percentage of our debt (excluding Water Debt) to the valuation of 1898, is 3.66.

Fees.

During the year the Treasurer has received official fees amounting to $2,311.09, itemized as follows: —

Summonses to delinquents	$1,028 40	
Preparing advertisements of sale	398 50	
Advertisements of sale	181 69	
Posting notices of sale	270 50	
Making tax deeds	216 00	
Making affidavits	216 00	
		$2,311 09

These fees were all turned into the City Treasury as received.

Cemetery Fund.

This fund, held by the City Treasurer in trust, comprises sums received from the proprietors of lots in our Cambridge Cemetery for the perpetual care of their lots therein. The amount of the fund is now $43,273.78, and is invested as follows, viz.:—

City of Cambridge	4 %	registered bond,	due	November 1, 1903,	for $10,000 00
" "	3½%	"	"	November 1, 1906,	" 7,000 00
" "	4 %	"	"	November 1, 1907,	" 2,000 00
" "	3½%	"	"	August 1, 1908,	" 4,900 00
" "	4 %	"	"	November 1, 1909,	" 2,000 00
" "	4 %	"	"	May 1, 1910,	" 5,000 00
" "	4 %	"	"	October 1, 1916,	" 2,000 00
" "	3½%	"	"	August 1, 1918,	" 1,000 00
" "	4 %	"	"	October 1, 1925,	" 7,500 00
Deposited in Cambridgeport Savings Bank					1,873 78
					$43,273 78

The income from this fund is annually credited to the account of the "Cambridge Cemetery," to be expended by the Commissioners of said Cemetery in the carrying out of the City's obligation.

The Sarah E. Russell Fund.

In March of the present year, the City received from the executors of the estate of the late Sarah E. Russell the sum of $814.41, which was bequeathed to the City by the testatrix, — "the income therefrom to be annually expended in or towards providing a Christmas tree or Christmas gifts and entertainment for the inmates at the time of the Cambridge Almshouse." This bequest was gratefully received by the City Council, and the trust assumed.

This fund, by order of the City Council, is held by the Mayor and City Treasurer, and at present is on deposit in the Cambridgeport Savings Bank. At this writing it amounts to $822.55.

Very respectfully,

WM. W. DALLINGER,

City Treasurer.

Temporary Loans, in anticipation of Taxes, negotiated in the year ending November 30, 1898.

Date.	Maturity.	Amount.	
1898.	**1898.**		
Jan. 15.....	Oct. 11.....	$50,000	Discounted at 2.90 per cent. per annum.
Jan. 15.....	Oct. 11	25,000	" " 2.90 " "
Jan. 15.....	Oct. 11.....	25,000	" " 2.90 " "
Feb. 5.....	Oct. 12.....	50,000	" " 2.67 " "
Feb. 8.....	Oct. 12.	50,000	" " 2.66 " "
Feb. 25.....	Oct. 13.....	50,000	" " 3.00 " "
March 8.....	Oct. 13.....	25,000	" " 3.25 " "
March 8.....	Oct. 13.. ...	25,000	" " 3.16 " "
March 8.....	Oct. 14	25,000	" " 3.16 " "
March 8.....	Oct. 14.....	25,000	" " 3.16 " "
March 22.....	Oct. 14.....	25,000	" " 4.00 " "
March 22.....	Oct. 14.....	25,000	" " 4.00 " "
April 2.....	Oct. 14.....	50,000	" " 4.50 " "
April 18.....	Oct. 14.....	20,000	" " 4.50 " "
Aug. 10.....	Oct. 14.....	30,000	" " 2.50 " "
		$500,000	Average rate 3.284 per cent.

Particulars concerning the Bonds negotiated during the Year ending November 30, 1898.

Date of Sale.	Amount.	Loan.	Years to run.	Rate of Interest.	Purchaser.	Price paid.	Basis.
1897.				Per cent.			Per cent.
Dec. 14...	$40,000	Water	20	3½	Trustees, Sinking Fund of Cambridge Water Works	104.555	3.20
Dec. 15...	100,000	Water	20	3½	Third National Bank of Boston, Mass	104.555	3.20
1898.							
May 2...	100,000	School House	20	3½	B. F. Keith	Par	
May 5...	50,000	Water	20	3½	Adams & Co	101.000	3.43
May 23...	15,000	Street	20	3½	Parkinson & Burr	102.20	3.35
June 30...	50,000	Park	40	3½	Adams & Co	105 57	3.25
June 30...	50,000	School House	20	3½	Adams & Co	103.66	3.25
June 30...	60,000	Water	20	3½	Adams & Co	103.66	3.25
Aug. 12...	4,900	City	10	3½	City Treasurer, Trustee for Cemetery Fund	Par	
Aug. 12...	1,000	School House	20	3½	City Treasurer, Trustee for Cemetery Fund	Par	
Aug. 29...	50,000	Charles River Improvement	40	3½	Whann & Schlesinger	One price paid for aggregate of these bonds.	3.10
Aug. 29...	10,000	Clay Land	15	3½	Whann & Schlesinger		3.10
Aug. 29...	50,000	Park	40	3½	Whann & Schlesinger	107.517	3.10
Aug. 29...	140,000	School House	20	3½	Whann & Schlesinger		3.10
Sept. 23...	1,000	School House	20	3½	Trustees of Cambridge Public Library	Par	
Nov. 29...	50,000	Water	20	3½	Perry, Coffin and Burr	106.24	3.08
					Average basis about 3.244		
	$771,900						

Recapitulation.

Charles River Improvement Loan	$50,000	Street Loan	$15,000
City Loan	4,900	Water Loan	300,000
Clay Land Loan	10,000		
Park Loan	100,000	Total	$771,900
School House Loan	292,000		

REPORT OF THE COMMISSIONERS OF THE SINKING FUNDS OF THE CITY OF CAMBRIDGE

To the Honorable the City Council:—

The undersigned Commissioners of the Sinking Funds of the City herewith present their twenty-third annual report, covering the year ending November 30, 1898.

DR.		
The amount of the funds November 30, 1897, was	$714,973 91	
Received from the City Treasurer the annual requirements for the year as appropriated by the City Council for the different loans	125,947 50	
Received interest on invested funds	32,026 21	
		$872,947 62
CR.		
Paid the City Treasurer amount necessary to meet maturing "City Hall Land Loan" bonds	$83,000 00	
Paid accrued interest on investments purchased, etc.	1,217 16	
Paid premium on investments purchased	8,368 75	
Leaving the amount of the funds November 30, 1898, all securites enumerated at par	780,361 71	
		$872,947 62

The market value of the securities held in these funds, by a very conservative reckoning, exceeds the par value by about $53,000.00

The following are the investments belonging to the funds: —

Cambridge	6s,	Maturing	July 1, 1904	$90,000 00	
"	6s,	"	July 1, 1904	2,000 00	
"	6s,	"	July 1, 1905	14,000 00	
"	6s,	"	July 1, 1905	49,000 00	
					$155,000 00
Providence	4 1-2s,	"	June 1, 1899	64,000 00	
Brockton	4s,	"	June 1, 1899	4,000 00	
Quincy	4s,	"	July 1, 1900	500 00	
Gloucester	4s,	"	May 1, 1901	4,000 00	
Brockton	4s,	"	June 1, 1901	3,000 00	
Quincy	4s,	"	July 1, 1901	2,500 00	
Somerville	4s,	"	July 1, 1901	16,000 00	
Brockton	4s,	"	Dec. 1, 1901	4,000 00	
Gloucester	4s,	"	May 1, 1902	4,000 00	
Quincy	4s,	"	July 1, 1902	7,500 00	
Somerville	4s,	"	July 1, 1902	14,000 00	
Cleveland, O.	3 65-100s,	"	Sept. 1, 1902	1,000 00	
Brockton	4s,	"	Dec. 1, 1902	4,000 00	
"	4s,	"	June 1, 1903	4,000 00	
Quincy	4s,	"	July 1, 1903	7,500 00	
Brockton	4s,	"	Dec. 1, 1903	4,000 00	
"	4s,	"	June 1, 1904	4,000 00	
Amounts carried forward				$148,000 00	$155,000 00

Amounts brought forward				$148,000 00	$155,000 00
Quincy	4s,	Maturing	July 1, 1904	7,500 00	
Lawrence	4s,	"	July 1, 1904	12,000 00	
Pawtucket, R. I.	4s,	"	July 1, 1904	15,000 00	
Hopkinton	4s,	"	Sept. 30, 1904	5,000 00	
Brockton	4s,	"	Dec. 1, 1904	4,000 00	
Quincy	4s,	"	July 1, 1905	7,000 00	
Haverhill	4s,	"	Oct. 1, 1905	50,000 00	
Brockton	4s,	"	Dec. 1, 1905	4,000 00	
Gloucester	4s,	"	May 1, 1906	2,000 00	
Quincy	4s,	"	July 1, 1906	1,000 00	
Fitchburg R.R. Co.	4s,	"	April 1, 1907	50,000 00	
Somerville	4s,	"	July 1, 1908	8,000 00	
Belmont	4s,	"	Oct. 1, 1908	15,000 00	
Pawtucket, R. I.	4s,	"	July 1, 1909	30,000 00	
Beverly	4s,	"	July 1, 1911	9,000 00	
Medford	4s,	"	July 1, 1911	26,000 00	
Boston & Lowell R. R. Co.	4s,	"	Feb. 1, 1913	1,000 00	
Medford	4s,	"	July 1, 1915	23,000 00	
Melrose	4s,	"	Feb. 24, 1916	10,000 00	
Brockton	3 1-2s,	"	July 1, 1916	5,000 00	
Boston & Lowell R. R. Co.	4s,	"	July 1, 1916	10,000 00	
Fitchburg R. R. Co.	4s,	"	July 1, 1916	10,000 00	
Marlborough	4s,	"	July 1, 1918	10,000 00	
Medford	4s,	"	Aug. 1, 1918	50,000 00	
Stoughton	4s,	"	June 1, 1920	2,000 00	
Reading	4s,	"	June 1, 1922	5,000 00	
"	4s,	"	June 1, 1923	5,000 00	
Medford	4s,	"	July 1, 1923	2,000 00	
Old Colony R.R. Co.	4s,	"	Dec. 1, 1925	50,000 00	
Fitchburg R. R. Co.	4s,	"	March 1, 1927	40,000 00	
					$616,500 00
					$771,500 00
Cash in bank on interest					8,861 71
					$780,361 71

CAMBRIDGE, December 13, 1898.

To the Board of Commissioners of the Sinking Funds of the City of Cambridge :—

Your Committee appointed to examine the accounts of the Treasurer of the Funds respectfully reports that his books are carefully and accurately kept and his accounts are correct and properly vouched. We have computed the cash and bond transactions for the year, independently of the Treasurer's books, and the present par value of Funds as shown by his books is thus verified.

The transactions of the Treasurer and the Sub-Committee on Investment during the year, and also the present condition of the Fund, is shown by the following statement:

BOND ACCOUNT.

Amount of bonds in the Funds, Nov. 30, 1897	$714,500 00	
Amount of bonds purchased during the year	$85,000 00	
Amount carried forward		$799,500 00

Amount brought forward		$799,500 00	
Amount of bonds matured during the year . .		28,000 00	
Amount of bonds in the Funds, Nov. 30, 1898 . .			$771,500 00

CASH ACCOUNT.

Cash on hand Nov. 30, 1897 . . .	$473 91		
Cash received from the City, derived from taxation	125,947 50		
Cash received from interest on investments	32,026 21		
Cash received from matured bonds . .	28,000 00		
		$186,447 62	
Cash paid for premium on bonds purchased	$8,368 75		
Cash paid for bonds purchased . .	85,000 00		
Cash paid for accrued interest on bonds purchased	825 28		
Cash paid City for interest on prepayment of amount due from taxation .	391 88		
Amount paid to redeem City Debt falling due this year	83,000 00		
		177,585 91	
Cash on hand Nov. 30, 1898, deposited in the First National Bank of Cambridge			8,861 71
Total amount of Funds, Nov. 30, 1898, all bonds taken at par value . . .			$780,361 71

FRANK A. ALLEN,
JOHN C. BULLARD, } *Committee on Accounts.*

The Bonded City Debt which the foregoing Sinking Funds are to pay, matures as follows, viz: —

Nov. 1, 1899, Street Widening . . .	4s	$8,000 00	
May 1, 1900, School House . . .	4s	100,000 00	
Jan. 1, 1901, " . . .	4s	100,000 00	
July 1, 1901, " . . .	4s	60,000 00	
July 1, 1901, Bridge	4s	15,000 00	
May 2, 1902, Street	4s	55,000 00	
May 2, 1902, Building	4s	20,000 00	
Nov. 1, 1902, Paving	4s	50,000 00	
Nov. 1, 1902, School House . . .	4s	20,000 00	
July 1, 1903, Sewer	6s	136,000 00	
July 1, 1903, Street Widening . . .	6s	10,000 00	
Nov. 1, 1903, Building	4s	40,000 00	
July 1, 1904, Sewer	6s	295,000 00	
July 1, 1904, Street Widening . . .	6s	90,000 00	
Aug. 1, 1904, City	4s	52,000 00	
July 1, 1905, Sewer	6s	144,000 00	
July 1, 1905, Street Widening . . .	6s	14,000 00	
Aug. 1, 1905, Cemetery	4s	65,000 00	
Nov. 1, 1907, Sewer	4s	30,000 00	
Nov. 1, 1907, Paving	3 1-2s	20,000 00	
Nov. 1, 1907, School House . . .	3 1-2s	9,500 00	
Nov. 1, 1907, Street	3 1-2s	11,000 00	
Aug. 1, 1908, City	3 1-2s	4,900 00	
Nov. 1, 1909, Sewer	4s	22,000 00	
Amount carried forward		$01,302 00	

Amount brought forward				$0834,40 47
May	1, 1910,	"	4s	15,000 00
July	1, 1911,	"	4s	15,000 00
July	1, 1911,	Clay Land	4s	50,000 00
Nov.	1, 1912,	"	3 1-2s	20,000 00
Aug.	1, 1913,	"	3 1-2s	10,000 00
Aug.	1, 1914,	Building	4s	118,000 00
Aug.	1, 1914,	Street	4s	30,000 00
Oct.	1, 1915,	Building	4s	60,000 00
Oct.	1, 1915,	Street	4s	60,000 00
July	1, 1916,	Building	4s	70,000 00
Oct.	1, 1916,	Street	4s	137,000 00
Oct.	1, 1916,	Building	4s	33,000 00
Oct.	1, 1916,	Sewer	4s	75,000 00
Oct.	1, 1916,	School House	4s	6,000 00
July	1, 1917,	"	3 1-2s	100.000 00
Oct.	1, 1917,	Harvard Bridge	4s	10,000 00
May	2, 1918,	School House	3 1-2s	100,000 00
May	2, 1918,	Street	3 1-2s	15,000 00
June	1, 1918,	School House	3 1-2s	50,000 00
July	1, 1918,	Harvard Bridge	4s	100,000 00
Aug.	1, 1918,	School House	3 1-2s	142,000 00
Sept.	1, 1918,	Harvard Bridge	4s	100,000 00
March	1, 1919,	"	4s	115,000 00
Nov.	1, 1920,	"	4s	5,000 00
July	1, 1921,	"	4s	60,000 00
Aug.	1, 1923,	"	4s	10,000 00
Feb.	1, 1924,	Park	4s	360,000 00
Aug.	1, 1924,	Sewer	4s	75,000 00
Oct.	1, 1925,	"	4s	60,000 00
Aug.	1, 1926,	Park	4s	100,000 00
Oct.	1, 1926,	"	4s	40,000 00
Aug.	1, 1935,	"	4s	100,000 00
Feb.	1, 1936,	"	4s	100,000 00
Sept.	1, 1937,	"	3 1-2s	100,000 00
Nov.	1, 1937,	Charles River Improvement	3 1-2s	50,000 00
June	1, 1938,	Park	3 1-2s	50,000 00
Aug.	1, 1938,	"	3 1-2s	50,000 00
Aug.	1, 1938,	Charles River Improvement	3 1-2s	50,000 00
				$4,012,400 00

Purposes for which the outstanding bonds were issued: —

Erection of School Houses	$843,500 00
Building of Bridges	415,000 00
For Sewers	867,000 00
For Streets	500,000 00
Erection of Public Buildings	185,000 00
Parks	1,000,000 00
Cemetery Land	65,000 00
Clay Lands	80,000 00
City Loans	56,900 00
	$4,012,400 00

The past year continues to show a large increase of the City Debt for which City Bonds (three and a half per cent) have been issued, to the amount of $471,900.00, for the following purposes, viz.:

City Loan Bonds to the amount of $4,900.00, payable in 10 years.
Clay Land Bonds to the amount of $10,000.00, payable in 15 years.
School House Bonds to the amount of $292,000.00, payable in 20 years.
Street Loan Bonds to the amount of $15,000.00, payable in 20 years.
Park Loan Bonds to the amount of $150,000.00, payable in 40 years.

City Hall Land Bonds (four per cent), dated August 1, 1888, to the amount of $83,000.00, matured August 1st, and were paid from this fund. The total amount of City Debt proper now outstanding is $4,012,400.00, from which deducting the present assets of the fund at their par value, $780,361.71, leaves the net amount of Bonded Debt, November 30, 1898, exclusive of the Water Debt, $3,232,038.29, showing a net increase of debt for the year above the earnings of the fund, of $323,512.20. The valuation of the City as returned by the Assessors for 1898, is $89,551,090.00, which shows an increase of $2,909,345.00 over the valuation of 1897. There will be due the fund from taxation for 1899 the sum of $132,429.00. There will mature in 1899 City Bonds to the amount of $8,000.00 only, and consequently the fund will show a large increase the coming year.

Since 1876, bonds of the City have matured to the amount of $3,055,000.00, all of which have been paid from this fund, without in any case a renewal of the debt. We would here repeat that the fund is in excellent condition, all of the securities being in every respect first-class.

The following schedule shows the amount of bonds issued for the past five years for City purposes, with the amounts paid from the fund for matured bonds, also the net amount of debt for each year during this period, and the net valuation of the City each year.

Bonds Issued	Amount.	Bonds Paid from Fund.	Net Debt.	Net Valuation.
In 1894.....	$635,000 00	$130,000 00	$2,092,710 95	$76,091,754 00
In 1895.....	280,000 00	245,000 00	2,244,183 47	80,059,191 00
In 1896.....	611,000 00	54,000 00	2,731,331 76	83,014,751 00
In 1897.....	310,500 00	.....	2,908,526 09	85,736,730 00
In 1898.....	471,900 00	83,000 00	3,232,038 29	89,551,090 00
	$2,308,400 00	$512,000 00		

Total bonds issued in five years	$2,308,400 00
Total bonds paid	512,000 00

Respectfully submitted,

CHAS. H. SAUNDERS,
FRANK A. ALLEN,
JOHN C. BULLARD,
GEO. H. HOWARD,
ANDREW J. LOVELL,
J. HENRY RUSSELL,
Commissioners of the Sinking Funds of the City of Cambridge.

CAMBRIDGE, December 16, 1898.

REPORT OF THE TRUSTEES OF THE SINKING FUND OF THE CAMBRIDGE WATER WORKS

To the Honorable the City Council:—

The undersigned, Trustees of the Sinking Fund of the Water Works, herewith submit their annual report of the fund committed by law to their charge. The report covers the year ending November 30, 1898.

DR.

Amount of the fund November 30, 1897	$464,138 28	
Received during the year as follows:—		
From the Treasurer of the City of Cambridge the annual required appropriation from the water rates	103,656 00	
From interest on investments	10,153 53	
		$577,947 81

CR.

Amount paid City Treasurer to meet maturing bonds	$12,500 00	
Amount paid for interest on investments purchased	1,897 03	
Amount paid for premium on investments purchased	18,154 00	
Less the amount of the "Contingent Loan Obligation" of the City of Cambridge heretofore reckoned in the assets, now not included as interest-bearing assets	200,000 00	
Leaving the interest-bearing amount of the fund November 30, 1898	345,396 78	
		$577,947 81

The following are the investments belonging to the funds:—

Cambridge	4s,	Maturing	Feb.	1, 1913	$2,000 00	
"	4s,	"	Oct.	1, 1916	65,100 00	
"	3 1-2s,	"	Dec.	1, 1917	40,000 00	
"	4s,	"	Nov.	1, 1920	5,000 00	
						$112,100 00
Lynn	4s,	"	July	1, 1899	11,000 00	
Boston	4s,	"	April	1, 1900	4,000 00	
Providence, R. I.	5s,	"	July	1, 1906	50,000 00	
Hull	4s,	"	May	1, 1908	5,000 00	
Methuen	4s,	"	Aug.	1, 1908	10,000 00	
Somerville	4s,	"	July	1, 1910	8,000 00	
Wellesley	4s,	"	March	1, 1917	2,000 00	
Waltham	4s,	"	April	1, 1917	24,000 00	
Hallowell, Me.	4s,	"	Jan.	1, 1918	15,000 00	
Wellesley	4s,	"	March	1, 1918	1,000 00	
Penobscot Shore Line R. R. Co.	4s,	"	Aug.	1, 1920	25,000 00	
Quincy	4s,	"	May	1, 1923	2,000 00	
"	4s,	"	May	1, 1924	1,000 00	
Amounts carried forward					$023,831 50	$112,100 00

Amounts brought forward					$69,500 00	$112,100 00
Quincy	4s,	"	May	1, 1925	2,000 00	
"	4s,	"	May	1, 1926	3,000 00	
"	4s,	"	May	1, 1927	3,000 00	
Attleborough	4s,	"	July	1, 1927	10,000 00	
Quincy	4s,	"	May	1, 1928	3,000 00	
Winchester	4s,	"	June	1, 1928	6,000 00	
Quincy	4s,	"	May	1, 1929	3,000 00	
"	4s,	"	May	1, 1930	3,000 00	
"	4s,	"	May	1, 1931	3,000 00	
"	4s,	"	May	1, 1932	1,000 00	
Newton	4s,	"	Aug.	1, 1935	2,000 00	
"	4s,	"	July	1, 1936	11,000 00	
Old Colony R. R. Co.	4s,	"	Jan.	1, 1938	25,000 00	
						233,000 00
						$345,100 00
Cash in First National Bank of Cambridge						296 78
						$345,396 78

Contingent obligation of the City of Cambridge, $200,000.

The Bonded Water Debt, which the foregoing fund is to pay, matures as follows, viz: —

Nov. 1, 1906,	3 1-2s	$43,000 00
Oct. 1, 1907,	4s	90,000 00
Nov. 1, 1907,	4s	22,000 00
July 1, 1908,	4s	46,000 00
Aug. 1, 1908,	4s	25,000 00
July 1, 1909,	4s	20,000 00
May 1, 1910,	4s	288,000 00
July 1, 1910,	4s	75,000 00
Sept. 1, 1910,	4s	125,000 00
Jan. 1, 1911,	4s	20,000 00
Oct. 1, 1911,	4s	35,000 00
Jan. 1, 1912,	4s	150,000 00
May 2, 1912,	4s	75,000 00
Nov. 1, 1912,	4s	45,000 00
Feb. 1, 1913,	4s	100,000 00
Aug. 1, 1913,	4s	50,000 00
April 1, 1915,	4s	200,000 00
Aug. 1, 1915,	4s	200,000 00
April 1, 1916,	4s	100,000 00
July 1, 1916,	4s	200,000 00
Aug. 1, 1916,	4s	100,000 00
Oct. 1, 1916,	4s	265,100 00
April 1, 1917,	3 1-2s	200,000 00
July 1, 1917,	3 1-2s	100,000 00
Nov. 1, 1917,	3 1-2s	75,000 00
Dec. 1, 1917,	3 1-2s	40,000 00
Dec. 1, 1917,	3 1-2s	100,000 00
May 2, 1918,	3 1-2s	50,000 00
June 1, 1918,	3 1-2s	60,000 00
Nov. 1, 1918,	3 1-2s	50,000 00
April 1, 1924,	4s	300,000 00
		$3,249,100 00

In making the foregoing report a word of reminder and explanation may be necessary. The City Council will remember that no appropriation was made in the annual budget for any interest on the "Contingent Loan Obligation" for $200,000, which for fifteen years has been enumerated among the assets of this fund, and consequently no interest has been received by the Trustees on this obligation. While this obligation is still held among the possessions of the fund, we have felt that it was wise to refrain from enumerating it among the live assets held for the payment of the Bonded Water Debt, in view of the opinion of the City Solicitor, given to the Mayor and City Council of our City, that said "obligation" is not a legal and valid obligation of the City.

We note with regret that for the first time in a number of years, nothing has been received under the head of "surplus receipts."

We would respectfully call the attention of the City Council to the advisability of seeking an amendment to the Legislative Act of 1865, whereby these funds may be put into the charge of the Board of Commissioners of the Sinking Funds of the City, rather than to remain in charge of an ex-officio board, a majority of the members of which may be changed at any time.

ALVIN F. SORTWELL,
GEORGE E. SAUNDERS,
WM. W. DALLINGER,
} *Trustees of the Sinking Fund of the Cambridge Water Works.*

REPORT OF THE CITY ENGINEER

OFFICE OF THE CITY ENGINEER,
CAMBRIDGE, December 1, 1898.

To the Honorable the City Council:—

The thirty-second annual report of the City Engineer is herewith submitted, showing the operation and expenditures of the departments of Engineering and Sewers for the year ending December 1, 1898.

Office.

Ten assistants have been employed in this department the past year at various times, beside the clerk. In addition five assistants have been employed on work for the Park Department, and fourteen assistants on work for the Water Department during the early part of the year.

The yearly summary of work done is as follows:—

For Street Department.

Number of surveys	9
Number of street lines given	305
Number of street grades given	303
Number of streets on which paving, curb, etc., was measured	210
Number of assessments prepared	513
Number of plans or profiles prepared	36

For Sewer Department.

Number of surveys	10
Number of lines given	47
Number of grades given	140
Number of sewers measured	34
Number of sewers assessed	32
Number of sewer assessments prepared	139
Number of plans or profiles prepared	41

For Water Works.

Number of surveys	6
Number of lines given	3
Number of grades given	268
Number of plans or profiles made	62

For Park Department.

Number of surveys made	109
Number of grades given	124
Number of stone bounds set	9
Number of plans or profiles made	19

For Private Parties.

Number of street lines given	58
Number of street grades given	40

Miscellaneous Work.

Number of surveys at Cemetery	13
Number of surveys or levels made	87
Number of grades given	40
Number of houses measured	421
Number of stone bounds set	5
Number of plans or profiles prepared	400
Number of plans for assessors	1

There are now on file in the office 5,417 plans.

Assessors' Department Work.

The block plans for assessors' use have been completed and turned over to them. New houses built since last year have been measured, and with subdivision of lots, transfers, etc., have been plotted.

The major part of the time of one assistant has been given to work connected with the Assessors' Department.

Financial.

Appropriation	$11,000 00	
Expended	10,738 08	
Balance unexpended		$261 92
Assessors' plans	$447 75	
Expended	409 26	
Balance unexpended		$38 49

In addition to these sums, there have been expended for, and charged directly to other departments, sums as follows:—

Water Department, Hobbs Brook Basin	$4,632 22	
Park Department	4,240 10	
A total expenditure for Engineering of		$20,019 66

Streets.

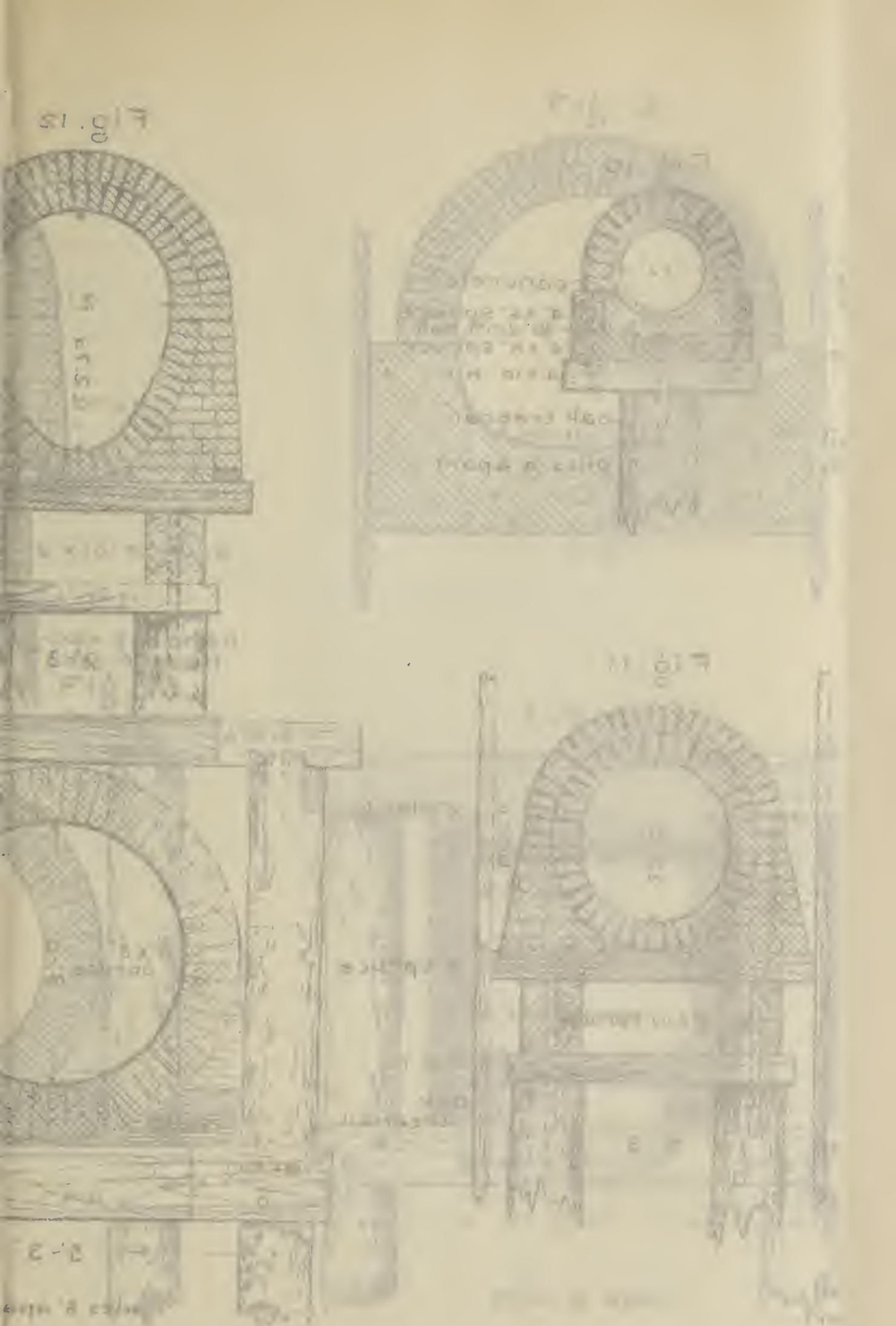
The following streets have had action taken upon them as follows:—

Streets Laid Out and Grades Established between December 1, 1897, and December 1, 1898.

STREET.						PLAN.	
Name.	From	To	Length in Feet.	Width in Feet.	Date of Acceptance.	Made by	Date.
†Belmont Street	Mt. Auburn Street	City Line	1182.4	.....	.....	City Engineer	Sept. 2, 1898
‡Chatham Street	Dana Street	Hancock Street	763.5	.....	.....	City Engineer	Aug. 31, 1898
*Holyoke Street	South Street	Mill Street	115.0	.....	.....	City Engineer	July 12, 1898
*Kinnaird Street	Putnam Avenue	Western Avenue	1776.0	.....	.....	City Engineer	July 5, 1898
Langdon Street	Chauncy Street	Massachusetts Ave	745.	varies.	Nov. 3, 1898.	G. A. Merrill	Aug. 12, 1897
Marney Street	Berkshire Street	Portland Street	300.39	40.0	Nov. 30, 1898.	E. F. Bowker	Aug. 1, 1898
Palermo Street	Winsor Street	Willow Street	311.65	40.0	Nov. 3, 1898.	Wm. H. Whitney	July 17, 1897
‖South Street	Boylston Street	Holyoke Street	486.2	21.00	.....	City Engineer	Nov. 1, 1898
Thorndike Street	Ninth Street	Boston & Albany R.R.	199.88	40.00	May 14, 1898.	City Engineer	April 20, 1897
Thorndike Street	Boston & Albany R.R.	Portland Street	2009.43	40.00	May 14, 1898.	City Engineer	April 20, 1897
‖Willow Street	Willow Street	Webster Avenue	.....	.....	July 5, 1898.	City Engineer	July 5, 1898

† Grade established Sept. 14, 1898.
* Grade established July 28, 1898.
‡ Grade established Sept. 14, 1898.
‖ Line established Nov. 23, 1898.
* Line and grade established Oct. 7, 1898.
‖ Area of land taken at corner = 12.12 square feet.

Total length of accepted Streets Dec. 1, 1897 = 89.75 miles. Total length of Streets accepted from Dec. 1, 1897, to Dec. 1, 1898 = 1766.35 feet, or 0.334 miles, making a total of 89.721 miles.



Bridges.

The iron bridges over the Fitchburg Railroad were found to be badly corroded, as reported last year.

During the past season these bridges were thoroughly scraped and cleaned and given two good coats of a specially prepared paint, and the parts exposed to the direct action of smoke and gases from the locomotives were still further protected by being covered with heavy sheet lead. While this is expensive at first, it is hoped that this method will, in the end, prove economical and efficient.

Sewers.

17,891.2 feet or 3,389 miles of new sewers have been built during the year.

The total mileage constructed to date is $106\frac{710}{1000}$ miles.

The total cost of this construction is $1,327,928.33.

All the sewers have been built by day labor in charge of the Superintendent of Sewers, under the general direction of the City Engineer.

Forty-eight catch basins have been built at a cost of $2,947.41. 5,465 loads have been removed from 1,871 catch basins at a cost of $6,288. This has all been done by day labor. Forty-eight catch basins have been repaired.

Metropolitan Sewer.

The sewerage of the City continues to be taken care of and disposed of by the Metropolitan Sewer, under the direction of the State, which service has, on the whole, been performed in a satisfactory manner. All the seventeen connections made with the system have been in constant operation during the year, except when shut by high water in the State sewer. An automatic registering apparatus has been placed at the Binney Street connection, so that a record may be obtained of the date and length of time during which the regulators are shut. The State tax for the year 1898 for the maintenance and running expenses of the Metropolitan Sewer is $5,280.45; for interest and Sinking Fund requirements $51,538.49, and the cost of maintaining the regulators and tide gates in the City has been $1,823.17.

Improved Sewerage.

In response to a resolve of the City Council, dated August 6, 1897, relating to defective sewerage of the City and its improvement, a considerable time was devoted to the consideration of the matter, and two reports were made thereon; one on October 15, 1897, being a preliminary report with suggestions, and on May 20, 1898, a second and supplementary report was made with recommendations, and the estimated cost of the sewers there proposed to be constructed.

In certain sections of the City the need for relief is undoubtedly great and it can be but a short time before the construction of at least some of the works contemplated will be imperatively demanded.

The conditions in the district adjacent to Pacific Street, to which several references have been made, remain unchanged for the better. Large quantities of stagnant water and the accumulating filth and débris of a thickly settled neighborhood, render the situation a very unsanitary one, and with the advancing occupation of the land for business purposes, call for action at an early date.

Sewers Constructed between December 1, 1897 and December 1, 1898.

Location.			Construction.							Total Cost.
Street.	From	To	Material.	Size in Inches.	Av. depth of Cut.	Man-holes	Lamp-holes.	Inlets.	Length in Feet.	
										***
†Albany	Massachusetts Ave.	Near Pacific St.	Brick and Concrete, Akron pipe	30x36, 25x29, 24x26, 18x20, 15, 12, 10 & 8	9.2	5	...	137	1019.8	$8,598 85
§Alpine	Concord Ave.	Field St.	Brick	30x32	3.9	1	...	26	382.1	*a*
Banks	Near Akron St.	Northerly	Akron pipe	10	7.2	..	1	6	74.1	74 00
††¶Bay State Road	Concord Ave.	Field St.	Brick and concrete	24x31, 24x26 and 20x22	9.9	2	...	55	830.8	*a*
¶Birch	Concord Ave.	Bay State Road	Akron pipe	12 and 10	7.3	..	1	28	399.2	*a*
*¶Chilton	Concord Ave.	Field St.	Portland & Akron pipe	12	8.6	..	...	28	419.8	*a*
Clement Circle	Sparks St.	Easterly	Portland pipe	10	7.9	1	1	10	197.1	202 71
§§Concord Avenue	Fresh Pond Ave.	Walden St.	Brick & Portland pipe	39x41, 36x38, 31x33, 12 and 10	8.3	8	1	143	2215.9	22,717 19
§Copley	Fayerweather St.	Walden St.	Portland pipe	10	9.2	..	1	41	500.8	*a*
¶Dale	Concord Ave.	Field St.	Akron pipe	12 and 10	6.4	..	1	28	372.1	*a*
Dana	Massachusetts Ave.	Center St.	Portland pipe	10	9.7	..	1	19	262.7	1,701 65
Dudley	Montgomery St.	Reed St.	Akron pipe	10	6.7	..	1	14	234.7	111 36
Dudley	End of old sewer	Montgomery St.	Akron pipe	10	7.9	..	...	2	28.5	45 00
Dunster	Mount Auburn St.	Massachusetts Ave.	Portland pipe	12	14.1	1	...	26	318.4	3,099 82
Eighth	Thorndike St.	Northerly	Akron pipe	8	7.3	1	...	2	89.0	89 00
Elmwood Ave.	Mount Auburn St.	Brattle St.	Brick and concrete	28x36	12.1	..	...	41	764.3	2,518 83
§Fayerweather	Concord Ave.	Walden St.	Brick & Portland pipe	27x29, 24x26 and 15	9.0	3	...	65	973.5	*a*
¶Fern	Concord Ave.	Field St.	Akron pipe	12 and 10	7.0	..	1	32	438.2	*a*
**¶Field	Bay State Road	Fayerweather St.	Brick, Portland and Akron pipe	18x20, 12 and 10	6.4	4	3	75	1067.2	*a*
†Fifth	End of old sewer	Potter St.	Portland pipe	18	11.1	..	...	10	148.2	1,732 30
§Garden	Field St.	Walden St.	Brick & Portland pipe	27x29, 24x26, 18, 12 and 10	4.9	5	1	88	1250.1	*a*
Gerry	Mount Auburn St.	Ross St.	Akron pipe	12 and 10	5.0	1	1	25	397.0	280 05
Green	End of old sewer	E'ly near Pleasant St	Akron pipe	10	8.2	..	1	7	102.4	98 00
§Hazel	Garden St.	Fayerweather St.	Portland pipe	10	7.0	..	1	18	225.7	*a*
Highland	End of old sewer	Westerly near Reservoir St.	Akron pipe	8	8.9	..	...	4	88.0	73 07
Hollis	End of old sewer	E'ly near Mass. Ave.	Akron pipe	10	8.4	..	1	9	103.2	57 45
§Ivey	Garden St.	Fayerweather St.	Portland pipe	10	9.2	..	1	15	217.1	*a*
Kirkland Road	Kirkland St.	Southerly	Akron pipe	10	8.6	1	1	16	247.8	258 53
Lawrence	Niagara St.	Magazine St.	Akron pipe	10	6.5	..	1	4	113.8	62 21
Lincoln	Webster Ave.	Willow St.	Akron pipe	8	6.8	..	1	9	132.4	58 50

Mass. Avenue....	Ellery St.....	Easterly.....	Portland pipe.....	12	8.1	3	...	41	647.6	*b*
Mass. Avenue....	Albany St.....	Easterly.....	Brick, concrete and Portland pipe.....	30x36 and 15	15.4	1	...	8	239.6	*c*
Mount Auburn...	Plympton St.....	Dunster St.....	Portland pipe..... ...	24 and 18	10.0	3	...	26	677.8	*d*
Munroe	Near Third St.....	Easterly.....	Portland pipe.....	10	5.4	..	...	8	109.7	105 36
‡Potter.....	Fifth St.....	Third St.....	Portland pipe.....	12	11.0	2	...	25	323.2	*e*
Prentiss.....	Frost St.....	Westerly.....	Portland & Akron pipe	12 and 10	8.5	1	1	18	123.7	†††241 45
Seventh.....	Thorndike St.....	Northerly.....	Akron pipe.....	8	6.1	1	...	4	104.8	104 80
Sheridan.....	Sherman St.....	Near Raymond St...	Brick & Portland pipe	20x22, 18, 15 and 10	5.6	3	1	74	940.4	1,177 40
Third.....	End of old sewer...	Southerly near Cambridge St.....	Akron pipe.....	10	10.5	..	...	4	49.2	69 16
§§Walden.....	Garden St.....	Concord Ave.....	Portland & Akron pipe	12 and 8	9.1	1	2	49	721.0	*a*
Winsor.....	End of old sewer....	N'ly near State St. .	Akron pipe.....	10	8.0	..	1	6	61.4	42 35
York	Berkshire St.....	Hamlin St.....	Akron pipe..... ...	10	6.7	1	...	10	279.0	167 49
						49	26	1.256	17,891.3	$43,686 53

* Includes 248.3 feet on pile foundation.
† Pile foundation.
‡ Includes 253 feet on pile foundation.
†† Includes 713.8 feet on pile foundation.
§ Sewers in the Clay Land district built in 1896, but not then reported.
** Includes 90.6 feet on pile foundation.
§ Sewers in the Clay Land district built in 1896, but not then reported.

§§ Sewers in the Clay Land district built in 1897, but not then reported
††† Includes cost of rebuilding 130.6 feet.
¶ Sewers in the Clay Land district built in 1898.
*** Includes cost of storm sewer in Mass. Ave. and Albany St.
a For cost, see Concord Ave.
b Cost included in Dana St. sewer.
c Cost included in Albany St.
e Cost included in Fifth St.
d Cost included in Dunster St.

Otis Street sewer reconstructed between Ninth and Seventh Streets, 32x42. Brick and concrete, 376.3 feet. Cost, $1,937.28.

As set forth in the report above referred to, the proper drainage of much of the low lands, which form so large a part of the Cambridge territory, is both difficult and expensive, owing to the low, flat grade, and the depth at which good bottom is found. The introduction of the separate system, considered to be absolutely essential in obtaining good sewerage in these low grounds, will also increase the average cost per foot run of streets sewered, as two sewers will have to be constructed in every street, one for the sewage, and one for the storm water. Experience has shown that only the most solid and substantial form of construction will endure in the adverse conditions which obtain here. The foundations resting on piles, make a firm, unyielding base, and as the mud is sure to settle with the weight of filling, unless the top arch is strongly supported, it is almost certain to be found crushed in. This is especially true of pipe sewers laid on a pile foundation.

On the accompanying plate is shown a variety of methods of construction adopted for sewers in the low lands, and which will help illustrate the reason for their relative high cost. The last section on the plate illustrates the double construction in Albany Street, west of Massachusetts Avenue; the house sewer being at the bottom and the storm drain being placed above it in the same trench.

Clay Land Sewers.

The sewer system begun in this territory near Concord Avenue in 1896, was completed in the early part of the season.

The total length of sewer constructed in this scheme is 10,013.5 feet, and the total expenditure has been $22,717.19.

Financial.

Construction, General.

Appropriation	$30,000 00	
Expended	25,529 05	
Balance unexpended		$4,470 95
Receipts from assessments	$10,131 57	
Receipt from City of Somerville (Tannery Brook Sewer account)	754 77	
		$10,886 34

Construction, "Clay Lands."

Appropriation	$8,000 00	
Expended	7,992 19	
Balance unexpended		$7 81

Maintenance.

Appropriation	$20,000 00	
Expended	19,307 66	
Balance unexpended		$692 34
Receipts		199 03

Table showing Rainfall at Roberts Dam at Weston, Hobbs Brook in Waltham, the Fresh Pond Pumping Station (Cambridge Water Works), and at the Harvard Observatory, Cambridge, December 1, 1897, to December 1, 1898.

	1897. DECEMBER.				1898. JANUARY.				FEBRUARY.				MARCH.				APRIL.				MAY.				JUNE.				JULY.				AUGUST.				SEPTEMBER.				OCTOBER.				NOVEMBER.				
DAY OF MONTH.	Roberts Dam.	Hobbs Brook.	Fresh Pond.	Harvard Observy.	R. D.	H. B.	F. P.	H. O.	R. D.	H. B.	F. P.	H. O.	R. D.	*H. B.	F. P.	H. O.	R. D.	H. B.	F. P.	H. O.	R. D.	H. B.	F. P.	H. O.	R. D.	H. B.	F. P.	H. O.	R. D.	H. B.	F. P.	H. O.	R. D.	H. B.	F. P.	H. O.	R. D.	H. B.	F. P.	H. O.	R. D.	H. B.	F. P.	H. O.	R. D.	H. B.	F. P.	H. O.	DAY OF MONTH.
1		T	0.03		0.15			0.57	1.76	0.13	0.06	1.38														0.01	0.03						0.04	0.01		T												1
2												0.07			0.09				0.21							0.04	0.04	0.07										0.15	0.22	0.17									2
3		0.04	0.07										0.10		0.15	0.11	0.25	0.23		0.10			0.24	T		0.04	0.45	0.03									0.10	0.16		0.26				T				3
4	.07	0.34	0.28	0.07		0.09	0.09								0.48				0.05		0.16	0.24	0.01	0.21	0.43	0.36	0.29	0.46			0.26		0.31	0.50	0.34	0.32						0.49						4
5	.33	0.01		0.26	0.15			0.09		0.17	0.16		0.54			0.60			0.38	0.05			0.31	T	0.31	0.15		0.19				0.32	0.14		0.33	0.98					0.44	1.02	0.69	0.74			0.18		5
6						0.20	0.19					0.16					0.50	0.25		0.30	0.31	0.31		0.28									0.88	1.15	0.81	0.09					0.83	0.72		0.50			0.25	0.31	6
7		0.14	0.16		0.24		0.01	0.02																											0.13			0.65					0.35	0.43		0.07	7
8	.20	T		0.14																							0.05				0.26		0.30	0.11		0.10	0.59	0.63		0.57		0.22	0.04	0.20					8
9		0.01																							0.05			0.03	0.31	0.14	0.01	0.28	0.17	0.10	0.26	0.28					0.18	0.04	0.16				0.07		9
10																			0.11																										0.02	1.44	0.06	10
11																	0.12	0.10		0.09													2.17	2.17	2.45	2.28							0.90		1.67	1.58		1.39	11
12		0.33	0.35	0.19		0.05	0.05	T		0.15	0.13				0.07	0.04															0.15		0.06	0.03	0.17	0.10					1.08	0.13	0.01	0.78					12
13	.32			0.08	0.09			0.05	0.33			0.13	0.14			0.04			0.02												0.16	2.17	0.37	0.19	0.22	0.14	0.12							0.02						13
14		2.40	2.15			T		T		T	0.07							T	0.16	T					0.25	0.38			2.24	1.77		1.78											0.79		0.20	0.15	0.20	0.18	14
15	2.06	0.14	0.18	2.30§	0.32	0.52	0.30	T		T	0.05						0.07		0.95	0.22								0.15											0.07		0.78	0.72	0.13	0.75					15
16	0.31			0.09	0.07			0.28		0.05	0.04	T					0.73	1.13	0.01	0.78	0.41	0.38	0.44	0.36																	0.10			0.04					16
17		0.04	0.04						0.20			0.14			T	0.04			0.02		0.12	0.07	0.12	0.06											0.76		0.17	0.15		0.06					0.27	0.02	17
18	.04			0.02						T	0.02				0.03								0.02								0.55	T	0.39	0.45	0.24	0.92			0.03		0.25	0.24	0.45	0.22	18
19						0.26	0.20			T	0.04	0.05			0.31	0.22			0.62				0.09				0.61				0.43		0.56	0.14	0.13	1.32	0.26		0.30		T		0.83		0.30	0.47	0.89	0.53	19
20		0.19	0.18		0.27	0.90	0.83	0.38		1.43	1.70	T	0.54			0.19	0.50	0.68	0.06	0.54	0.09	0.04			0.51	0.60	0.19	0.50		0.01	0.02	T	1.09	1.85		1.45					0.80	0.71		0.81	1.08	0.01		0.75	20
21	0.20	T		0.18	1.01			0.64	1.35	0.50	1.17	2.17					0.07		0.02						0.20	0.13		0.18			0.42											1.19	T					21
22		T				0.90	0.86	T	1.11	0.25	0.12	1.07			0.05				0.10										1.14	1.58		0.32							0.47		1.09	0.90	0.15	1.16					22
23					0.81	0.12	0.16	1.22	0.08	0.14	0.05	0.18	0.16			0.08			0.73	0 16						0.21									0.32		0.45	0.66	0.24	0.49	0.07	0.03		0.16					23
24					0.40			0.01	0.15								0.88		1.51	1.01	0.07	0.05	0.06	0.06									0.50	0.30	0.03	0.31	0.20	0.12	0.15	0.12								24
25						0.99	0.77	0.81									1.50	2.47	0.11	0.97	0.23	0.34	0.45	0.95			0.08						0.15	0.20	0.04	T	0.07	0.09		0.09			0.04		0.45	0.44		0.34	25
26		0.15	0.22		0.77	0.06	0.03											0.08	0.05	0.09	0.98	0.67	0.74	0.38		0.17					0.15		0.09		0.08							1.66	T					26
27	0.19			0.20																	0.86	0.91	1.42	1.43						0.32		0.26					0.17	0.04		0.13	1.65	1.60		1.47			0.47	1.56	27
28																			0.77		0.23	0.02		T			0.08	T			0.25	T											1.99	2.47	0.54	0.97	28
29		0.09	0.07			T									0.30	T	0.55		0.34	0.76					0.13	0.12		0.05	0.38	0.37		0.22										0.09	T					29
30	0.30			0.08				T					0.34		0.36	0.32	0.20	0.78		0.19			0.02			0.01					0.23									0.06	0.08	0.03	0.10	0.29	0.33	0.16	0.23	30
31	0.49	0.52	0.58			2.02	1.26	T					0.29		0.19	0.39													0.22	0.55	0.03	0.14									0.03						31
Total,	4.51	4.40	4.31	1.31 3.61	4.28	5.91	4.75	4.07	4.98	2.82	3.61	5.35	2.11		2.03	2.03	5.37	5.72	6.22	5.26	3.46	3.03	3.92	3.73	1.88	2.22	1.82	1.66	4.29	5.33	4.50	4.25	6.62	7.22	7.34	7.29	1.90	2.37	1.78	1.72	7.11	6.17	7.22	6.71	6.58	6.14	4.92	6.63	

Water Works.

Water has wasted over Roberts Dam 260 days during the year, and was below the crest of the dam 105 days. The highest water reached February 22, 1898, was 1.27 feet above the crest. Elevation 82.27. One hundred twenty-two million eight hundred thousand gallons passed the dam that day. On August 5, 1898, the lowest water was reached, 5.58 feet below the crest, elevation 75.42.

Water wasted over the dam 260 days as follows: —

December, 1897	417,800,000	gallons
January, 1898	430,600,000	"
February, "	928,200,000	"
March, "	1,049,500,000	"
April, "	752,500,000	"
May, "	612,500,000	"
June, "	116,600,000	"
July, "		
August, "	113,100,000	"
September, "	1,600,000	"
October, "	294,400,000	"
November, "	987,800,000	"

Total amount passing the dam during the year 5,704,600,000 gallons.

At Fresh Pond the highest water was on May 2, 1898, at elevation 17.35. The lowest water October 19, 1898, at elevation 15.23.

Hobbs Brook Basin.

Work on the preparation of this basin was completed in January, 1898, and the final payment made to T. W. Kinser & Sons, contractors for the six sections "E to J" inclusive, in March, 1898.

The total number of cubic yards moved by them is 1,396,629, and the total amount paid on account of the contracts (not including day work), is $328,-717.18. The amount of payment made on account of extra and day work, mostly rip-rapping the shores of the basin, is $114,334.04.

The gates at Winter Street dam were shut December 16, 1897, and the basin commenced to fill. August 20, 1898 the basin was full and commenced to run over the waste way; the time occupied in filling the basin being but 247 days.

East Side Highway.

The County Commissioners, on a petition of certain inhabitants of the City of Waltham, and acting under an Act of the Legislature, dated May 9, 1895, ordered that a road or highway be laid out fifty feet wide, on the easterly side of the basin, and for the most of the way adjoining land taken by the city for the basin; the roadway to be built and graded twenty-four feet wide. The expense of building the roadway to be borne by the two cities in the ratio of two parts by Cambridge and one part by Waltham. In accordance with this order surveys and plans were prepared and a contract was entered into with Peter J. O'Malley of Waltham to construct the highway, the contract being dated April 27, 1898. The work was finished July 22, 1898. This highway is about 5,500 feet long, and the total payments on account of the contract have been $6,644.41.

The usual tables and data relating to rainfall will be found appended.

Table Showing Water Wasted Over Dams at Stony Brook Works, Also Yearly Rainfall.

Year.	WATER WASTED.		RAINFALL IN INCHES YEARLY.			
	Roberts Dam.	Hobbs Brook.	Roberts Dam.	Hobbs Brook.	Fresh Pond.	Harvard Obs.
1888	7,315,843,054				60.01	55.16
1889	10,202,623,580				60.08	47.50
1890	8,929,848,300		49.32	48.55	54.80	40.67
1891	8,214,428,000		49.11	48.69	48.25	45.51
1892	3,804,093,100		41.17	44.90	41.85	38.57
1893	4,735,829,200		39 52	41.54	40.49	37.42
1894	2,852,600,000		35.66	.....	35.85	32.93
1895	5,304,200,000	2,207,820,000	49.72	48.16	47.12	45.68
1896	5,852,700,000	1,832,410,000	41.77	36.82	38.82	39.35
1897	4,016,637,200	1,648,020,000	43.35	39.01	42.53	41.87
1898	5,704,600,000		53.09	.....	52.42	52.31

Average yearly rainfall for this vicinity = 45.85.

Table showing Comparison by Months, of Number of Days in which Rain fell, and Total Precipitation at Roberts Dam, Hobbs Brook, Fresh Pond, and Harvard Observatory, from Dec. 1, 1897 to Dec. 1, 1898.

		1897	1898.										
		Dec.	Jan.	Feb.	Mar.	Apr	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Total
Roberts Dam.	No. of Days in which rain fell.	11	11	7	7		10	7	5	15	8	12	9	113
	Total Precipitation.	4.51	4.28	4.98	2.11	5.37	3.46	1.88	4.29	6.62	1.90	7.11	6.58	53.09
Hobbs Brook.	No. of Days in which rain fell.	17	13	12	No Rec's	9	10	12	9	13	9	11	10	—
	Total Precipitation.	4.40	5.91	2.82	No Rec's	5.72	3.03	2.22	5.33	7.22	2.37	6.17	6.14	—
Fresh Pond.	No. of Days in which rain fell.	12	12	12	11	19	12	9	12	14	7	16	11	147
	Total Precipitation.	4.31	4.75	3.61	2.03	6.22	3.92	1.82	4.50	7.34	1.78	7.22	4.92	52.42
Harvard Observatory.	No. of Days in which rain fell.	11	16	11	11	14	11	10	12	15	8	15	13	147
	Total Precipitation.	3.61§	4.07	5.35	2.03	5.26	3.73	1.66	4.25	7.29	1.72	6.71	6.63	52.31

§ Owing to a leak in the rain guage the total rainfall for December, 1897, at Harvard Observatory, is made from an assumption of the rainfall for Dec. 15, 1897. Said leak occurred on Dec. 15, 1897, only.

THE HELIOTYPE PRINTING CO. BOSTON

HYDRAULIC DREDGE AT WORK FILLING ESPLANADE.

Park Department.

There have been employed five persons on engineering work connected with the Park Department during the year. The total expenditure for engineering has been $4,240.10.

The sea wall on Charles River, near Main Street, of which mention was made in my last report, was completed in May, 1898. The total length is 2,518.6 feet, and the total amount paid the contractor was $77,629.63. 8,817 cubic yards of stone ballast were placed back of the wall at a cost of $12,961.14.

The work of filling the Esplanade and flats adjoining was begun by the contractors March 11, 1898, and has been continued with slight interruption night and day since. At this time the flats are substantially filled to the required grade, and the filling of the Esplanade is well advanced.

The material for the filling—silt, sand, oyster shells, etc.— was taken by a hydraulic dredge in one operation from the bed of the river and deposited in place in the tract to be filled. At the Esplanade this filling is to be covered with at least a foot of good clean gravel. The cut shows the hydraulic dredging machine at work placing the gravel on the Esplanade.

The area of flats in possession of the City and which has been filled, is :—

City Wharf lot, rear Main Street	35,991	square feet
F. H. Rindge lot	10,635	" "
Esplanade, including sea wall	471,360	" "
Filled by special agreement with owner:		
B. F. Brown lot	33,220	" "

The total payments made by the City to date on account of the filling of these lands and the Esplanade is $33,217.36.

A considerable attention was given to the work of improvement on the Esplanade on either side of Massachusetts Avenue. About 1,230 feet on the easterly side and about 1,160 feet on the westerly side have been finished, including 5,090 feet of gravel roadway, and 1,710 feet of walks. In this connection also 40 gutter catch basins were built and about 4,710 feet of drainage pipe laid, for the purpose of removing the surface water from the improved tract. Lines and grades for seeded areas, tree planting, setting curb stone, were also given.

At the Captain's Island grounds about 86,400 square feet, or nearly two acres, have been graded for a play-ground, and Magazine Street Extension filled from Granite Street to the Park Road, and the Park Road from Magazine Street to Brookline Street, a length of about 1,500 feet. Sixteen thousand eight hundred and fifteen cubic yards of gravel were used in this work, all taken from the Charles River by the Bay State Dredging Company. As this filling crossed the outlet of the Pearl Street sewer, and would have caused a serious settlement, a section 350 feet long was relaid with a pile foundation, the expense being borne equally by the Park and Sewer Departments.

In order to exclude the salt water from the marsh land between Captain's Island and Brookline Street, a dyke became necessary on the river bank. Plans were accordingly prepared, and a contract made with Messrs. Nawn & Brock, for the construction of a mud and turf dyke about 1,350 feet long, of sufficient height and stability to exclude tide water. This work is now well under way, about 450 feet of dyke having been completed and the rest being in a more or less advanced state of completion.

A plan was made of the changed and improved entrance to the parkway at

Bath Street; a new lay-out of the street being adopted and the building restriction line on the parkway being extended to Mt. Auburn Street.

A survey and plan has also been made of the river bank, through the Cambridge Hospital grounds, for proposed improvements there.

Plans were made for the improvement of Rindge Field, and a gravel roadway on three sides of the field constructed, a total length of about 2,080 feet, and two catch basins constructed for surface water.

Respectfully submitted,

L. M. HASTINGS,
City Engineer.

REPORT OF THE BOARD OF CEMETERY COMMISSIONERS

CAMBRIDGE, December 1, 1898.

To the Honorable the City Council:—

The Board of Commissioners of the Cambridge Cemetery respectfully submits its forty-fifth annual report, the same being for the year ending November 30, 1898.

The amount appropriated at the beginning of the year was	$20,000 00
The total amount of expenditures was	19,832 66
Balance of appropriation unexpended	$167 34

For a detailed account of expenses, reference is made to the City Auditor's Report.

The receipts of the year have been as follows:—

Burial and tomb fees	$3,842 00
Care of lots	3,258 01
Sale of lots and graves	8,672 55
Foundations, brick graves, etc.	1,332 66
Interest on Cemetery Fund	1,533 16
Sundries	447 99
Total	$19,086 37
The estimated revenue by this Board was	19,500 00
Decrease of revenue over estimate	$413 63

As the City Council had estimated the revenue of this Department at $20,000.00, the apparent deficit in the returns amounts to $913.63.

It is difficult, at times, to estimate the revenue of the Department with exactness, and an example of this difficulty has been evidenced during the past season. In January last, when the estimates were made, there was no reason to believe that the receipts for burial and tomb fees would be materially reduced and yet, with practically the same amount received from the sale of lots and graves, the revenue from tomb and burial fees has decreased over $1,100, due, of course, to the smaller number of interments, there being only 564 in 1898 as against 673 in 1897, a decrease of 129. Such a pronounced reduction is unusual and probably will not occur for some years to come, and, with the ordinary number of interments, the estimate of revenue of the City Council, as well as of this Board, would have been met.

There is every reason to feel that the coming season will show a revenue equal to that of the present year, say about $19,500.00.

The past season has been a very busy one, requiring the employment of a slightly increased force and for a longer time.

In common with the past three or four seasons the growth of grass has been phenomenal. The rainy weather prevailing during so much of the summer induced such a crop of grass, that continual cutting was necessary to keep it within proper bounds, and, somewhat unusual, this cutting of the grass has continued even into November. The large hollow near the junction of River and Halcyon Avenues, bordering on the marsh, has been filled, and a guard fence has been constructed along the line of River Avenue, as suggested in our last report.

This fence was much needed, and renders travel in that vicinity safe. Willow and Fir Avenues have been practically reconstructed and are now in condition for several years' service. All the remaining avenues and paths have been given all needful attention and most of them are in good condition. Some of them, however, should be re-graded and filled with proper material for a roadbed, as they are hardly safe for use by a heavily loaded team. Notably, that portion of River Avenue along the bluff, Meadow, Summit to Chestnut, Beach, Lawn, Island, Central, and Oak Avenues, should have particular attention in this respect. Originally laid out over pasture land, with no stable bottom, the ordinary wear and tear of years has left them without any solid foundation, and it would seem that a regrading and proper filling would be necessary. This will not be a very expensive undertaking and the Board intends to include the cost in its estimate for the ensuing year.

In connection with this matter of avenues and paths, it might be well to note the value of the red stone dust which has been used for surfacing during the past year. This dust has proven beneficial in improving the appearance of the avenues, and on account of its binding quality, should be recommended for future use and a stock of it should be always on hand. An expenditure of $200.00 will be sufficient for the season.

The recommendation of last year of a guard rail on Meadow Avenue, from the Old Receiving Tomb to the Soldiers' Lot on Prospect Avenue, is renewed. Every reason for its construction heretofore, exists today. The abrupt slopes on either side of Meadow Avenue invite washouts and caving of the embankment and it seems to be necessary to construct a guard to prevent accidents. The Superintendent of the Cemetery strongly recommends this construction for a distance of about 800 feet.

The Superintendent's report presents statistics of the work of the year from which the following facts are taken:—

Number of lots prepared	150
Estimated value of the same	$9,685.00
Number of lots ready for sale	273
Estimated value of the same	$51,415.00
Number of single graves ready for sale	352
Estimated value of the same	$6,160.00
Number of interments	564
Number of removals to other cemeteries	17
Number of interments in cemetery (total)	22,206
Number of burials (Overseers of Poor)	44
Number of monuments erected	12
Number of headstones erected	100
Number of lots sold	44
Number of graves sold	25
Average number of men employed	19 1-9

Ward One Burial-Ground.

This burial-ground has been maintained in its usually satisfactory condition at a reduced expenditure. The thorough work of renovation and care devoted to this ground in recent years has required less labor than ordinarily, and the amount expended has been but $143.75. The desirability of ascertaining the titles to the contiguous properties is as urgent as ever, but we regret to state that not much has been accomplished in this direction. By the careful search of our conveyancer we have been able to ascertain some details which have heretofore been wanting, but important facts remain to be learned. The records are so imperfect and obscure on many important points that the labor is tedious and the actual results as yet not satisfactory. From what has been gleaned, however, we feel confident that before another year goes by the titles to most, if not all, of the adjoining estates will have been settled and the true lines of the burial-ground determined.

Soldiers' and Sailors' Lots.

The remains of six veterans of the Civil War have been interred in the lot on Summit Avenue during the year, making 18 interments since the lot was opened in 1896. Only ordinary attention was given to both of the lots set aside for the interment of veterans, as all constructive work had been completed last year. This Board has under consideration a plan for marking the graves in the later lot to overcome the many objectionable features in the reservation on Prospect Avenue. The large accumulation of stones, however beautiful each may be in itself, has proven undesirable, as not being in good form, and further opposed to the prevailing sentiment of a rural burial-place. The inflexible, unbroken outlines of a mass of tablets, similarly cut and arranged, presents a rigid, overpowering sense of a well-stocked stone yard in the midst of a natural, peaceful scene which must appeal to any on-looker as decidedly incongruous. The commercial aspect at once is suggested, to the exclusion of the chaste and sentimental.

To overcome this difficulty and yet give due and proper regard to the statistics so necessary in an enclosure of this nature, is the problem before this Board, and in its consideration no little difficulty has been experienced to arrive at a just and reasonable conclusion. The practice in other cemeteries has been ascertained, the ideas of authorities in such matters consulted, and sketches and designs of tablets procured, until at length a conclusion will undoubtedly be reached in a short time. One step has been decided, — that in the new lot there must be no large marble tablets. Either a smaller granite stone will be used if it should be finally determined to mark each grave with a tablet, or a series of shafts or sarcophagi will be agreed upon to be placed at either end of each range, with suitably appropriative inscriptions. Whatever course is to be followed, the completion of some kind of entablature may be confidently anticipated very early in the coming season.

Perpetual Care.

The items with reference to the growing tendency of lot owners to place their lots under the continuous care of the Cemetery authorities possess an increasing interest. Each recurring year brings evidence of an augmenting desire on the part of prospective purchasers to so arrange their domestic affairs

as to include this method of securing proper treatment of spots, hallowed by the highest sentiments in the human heart. Since the last Report, 22 lots have been placed under the workings of the perpetual care fund, a number equal to one-half of all the lots sold in the same time. If this proportion had been observed from the beginning, beneficial results would be apparent throughout the whole Cemetery and many unsightly spots never would have existed. If lot owners would only remember that, at the time of purchase, a lot could be placed in perpetual care at an additional cost of about 75 cents per square foot, for which the City will agree to forever give such lot the attention which it must have if its neat appearence is to be maintained, surely a very large percentage of purchasers would avail themselves of the opportunity offered. Not only does the City assume the ordinary care of the lot, such as cutting the grass and trimming, but new sod will be placed whenever the life of existing turf has ceased. The sum of $3,089.20 was received during the season for this fund, thus making a total of $43,273.78.

The total number of lots under perpetual care is now 323.

Public Lot.

A question of much importance that has confronted this Board is that of supplying suitable burial-places in the public lot to meet the steadily increasing demand. There is now no portion of the Cemetery which would seem to be especially adapted to the uses of a public lot as the laying out of such a range in any of the territory remaining at disposal would unquestionably diminish the value of contiguous lands. All of the Cemetery land has been laid out into lots except the Greenwood Avenue Section and the marsh lands in the vicinity of River Avenue.

It would seem unwise to designate any range of public lots in the Greenwood Avenue Section. Situated between Coolidge Avenue, a public thoroughfare, and Winchester Avenue, one of the main avenues in the Cemetery, this plot is destined to be, by its location, the most prominent part of the Cemetery, the portion which will undoubtedly impress the mind of the passing traveller with the beauty, or lack of it, in the Cemetery. And no small amount of other advantages must be presented to convince one whose sentiment has been unfavorably aroused by the distasteful appearance of this most conspicuous locality of the Cemetery as a burial-place. Experience has proven the impossibility of preserving in the best form a trim, neat appearance in public ranges. The disposition of the people who seek this method of interment, or their lack of financial ability to care for these resting-places of their kindred, prevents the giving of that care which is so essential. Many are interred in the public lot who have no kin or friends sufficiently interested, and, in time, the sunken grave and neglected sod tells too plainly the story of neglect or forgetfulness. Even the intention of this Board to lay out this Section under the lawn system, must fail to remove all of the objectionable features of a public lot. No argument would seem to be necessary to preserve this Section for private lots, which should be, if possible, placed under perpetual care, so that our citizens in beholding this portion of the Cemetery alone, may bear with them a correct impression of its beauties.

The question of utilizing the marsh lands for public ranges has been given much attention. For several years this project has been quite generally

discussed but no definite action has materialized, as there has always been available territory for this purpose, until this year some positive step must be taken, the supply of public lots being almost exhausted.

In the Annual Report of this Board in 1892, the reclamation of these marsh lands was deemed to be undesirable, and the opinion then expressed may be held with equal force to-day. The cost of the undertaking, the improbability of selling for private lots, the availability of location in new territory at a less or equal cost, were reasons then for not preparing the marsh lands for burial purposes, and they are reasons now.

Since that report too, a new factor must be considered. The Metropolitan Park Commission has determined to take almost all of the marsh lands for the use of its Parkways and enclosure, and, if all of these lands should be taken, as seems probable, we must of necessity look elsewhere for territory for a public lot. The plans of this Commission are not yet completed and, it may be, that any remaining marsh lands can be converted to this use, by an arrangement with the Commission, at a great saving in expense, when of course this Board would recommend that these lands be prepared at once. A decision will very likely be reached shortly and this Board will communicate its recommendations to the City Council in due season.

Pond on Island Avenue.

Year after year, it becomes more and more difficult to keep this pond in suitable condition. By reason of the lack of proper outlet, flushing has been of questionable value, and as the pond is a natural drain for the Fountain Avenue and adjoining sections, the accumulations are becoming more offensive. The diminishing amount of land in the Cemetery for burial purposes, has suggested the feasibility of changing the character of this basin, and of procuring available and remunerative lots by filling up the pond. Communication was had with City Engineer Lewis M. Hastings with reference to this matter, and a reply was received embodying his ideas with respect to filling the pond, as well as to the use of the marsh lands.

This reply was as follows:

OFFICE OF CITY ENGINEER, CITY HALL,
CAMBRIDGE, October, 15, 1898.

Mr. George S. Saunders, Chairman Cemetery Commission:—

DEAR SIR:—Agreeably to your request, I have considered the various matters referred to in our conversation, and first, I have made a survey of the pond situated near Island Avenue, and find the area which is to be filled to be about 43,500 feet. The bottom of this pond contains a large amount of mud of a very soft character, which will undoubtedly cause some trouble in the filling by being squeezed toward the top.

It has always been found difficult to fill a place of this character, and keep the mud at the bottom. Care will have to be exercised in making the filling, to do it in such a way or at such a time of the year, that the mud can be kept from rising to the top, and causing serious trouble. The amount of material which will be required to fill this pond, I estimate to be 20,000 cubic yards, and in addition, the spaces not occupied by avenues would require at least a foot of loam. An approximate estimate of the cost of this filling would be as follows:—

20,000 cubic yards gravel filling at 70 cents	$14,000 00
1,100 cubic yards loam at $1.00	1,100 00
Total	$15,100 00

To this should be added a small amount for grading lots and paths, also the cost for extending the drain.

As this pond has always been a rather unsightly spot, and of little practical use, it would seem that it might now be well utilized for burial purposes.

With reference to the needs of the Cemetery for more lots for public burial, I find that by the plan there are now proposed 432 lots. Between River Avenue and Winchester Avenue,—and between River Avenue and the marsh line on the very steep slope, there are about 915 lots, or a total of 1,347 lots available for future use, many of which would be extremely difficult of access.

The Superintendent, Mr. Childs, tells me that for the last three years, the public burials have averaged somewhat more than 600 a year, so that the time is but short before the acquirement of new ground will be absolutely necessary. Some of the ground already proposed to be laid out for public burial is of superior character and location, and might well be devoted to sale lots.

Two methods of obtaining additional land for public burials seem feasible: One to fill the marsh lands on the banks of Charles River now owned by the City as a part of the Cemetery grounds. Second to purchase or take the large tract of low ground just north of the Cemetery now owned by the Mt. Auburn Cemetery and the Heirs of Josiah Coolidge.

With regard to the matter of the treatment of the flats lying between Charles River and the high lands of the Cemetery, I find that there are now owned by the City about 13.4 acres of marsh lands which are substantially at the elevation of high tide in the river. To render this tract available for burial purposes a large amount of filling will be needed; also, it seems not unlikely a substantial strip of land adjoining the river will be required at no distant day by the Metropolitan Park Commission, for a connecting drive or parkway, which is proposed to be constructed above and below this point on the river bank.

I have been unable to obtain from the Park Commission any statement as to what they would require; their plans are not yet matured sufficiently to warrant them making any statement to this effect. I have assumed, however, for the purpose of this report, that a strip 135 feet wide on the entire river front of the Cemetery property will be needed for the purpose of making a beach, roadway, walk, and planting spaces, similar to work which has already been done in this line.

I have prepared a plan which accompanies this, showing the Cemetery grounds with considerable territory adjoining, showing what has been done, and is now proposed to be done by the Cambridge and Metropolitan Park Commissions. Considering that the Metropolitan parkway will need the strip of land above referred to, I find that there is remaining about 6.4 acres.

I find there is required on an average for each public lot 3 1-2x8 1-2 feet in dimension, including paths and avenues, 43 square feet. On this tract, at this rate, there might be opportunity for about 6,700 lots for public burial.

In order to render this suitable for burial purposes I have estimated that eight feet of clean filling will be required, and that on the lots in addition, one foot of loam will be required. This filling is rendered still more necessary by the fact that there is something like 20 feet of marsh mud which is soft and

liable to a considerable settlement. Underneath this marsh mud soundings seem to show a soft clayey material. There is a question in my mind whether it will be safe to place so much filling on this soft material, especially as the river has recently been dredged to a considerable depth. Unless the shore of the river is heavily loaded with gravel or ballast it would not be unlikely that a movement of the marsh and filling together might take place toward the river. I had a case very similar to this on the filling on Mt. Auburn Street, opposite the Longfellow gardens, where a settlement of from six to eight feet took place in one night, accompanied by a movement of the filling material and marsh toward the river. A wooden bulkhead was found to be necessary at this place to restrain this tendency.

Whether the Metropolitan Park Commission will so construct a roadway and a beach on the river so as to render it safe to place such a heavy load upon the marsh land in the rear, I am not informed, but think it very doubtful. I have prepared an approximate estimate of the cost of filling the area behind the suggested parkway, which is as follows: —

Filling 291,200 square feet (8 feet deep) equals 86,280 cubic yards at 60 cents	$52,000 00
Loam, 8,000 cubic yards at $1.00	8,000 00
Total	$60,000 00

To this should be added the cost of labor, grading and preparing the lots and surfacing the avenues and paths. If the proposed Charles River dam is constructed and the water in the river kept at a lower elevation than high tide, one or two feet less in depth of filling might be required.

The second plan would contemplate the acquirement of a tract of about 20.5 acres of land, mostly meadow or marsh, including the gravel hill or knoll near the Metropolitan Park Reservation and the land of the Mt. Auburn Cemetery Corporation now largely filled. The knoll referred to would fill a considerable portion of the tract remaining.

As this is nearly surrounded by high land and is removed from the river, none of the uncertainties attending the filling of the first mentioned piece would be encountered here; while its situation near the highway and the Cemetery grounds would seem to make it more desirable for burial purposes.

I have made no estimate of the cost of filling this land as I have not the data at present, neither have I the price at which it could be purchased or taken.

Very respectfully,

L. M. HASTINGS,
City Engineer.

Sewer From the Pond.

Of imperative importance, is some means of sufficient drainage of the Pond and its vicinity, so that the surface water may be carried from the Fountain Avenue and Island Avenue sections.

Many times the attention of this Board has been called to the insufficient drainage, resulting mainly from the closing of the old drain which served as an outlet for the Pond and its accumulations. This drain emptied into the marsh on the banks of the river and served its purpose to fair satisfaction for

a brief period, but is now of no value whatever. It has seemed to this Board that the most necessary work of the coming year would be the laying of a new and larger outlet, and a consultation with and an examination by the City Engineer, has disclosed some unexpected difficulties which will largely increase the cost of the work. Mr. Hastings has given the Board an estimate for an expenditure of $2,550.00 which will give to the Cemetery, in its most beautiful portion, a sewer of proper capacity to thoroughly meet the demand for it.

This work should be begun at the earliest possible time and, as no difficulty is apprehended in securing the assent of the Metropolitan Park Commissioners to a drain through their lands, the benefit would be noticeable early next summer.

The building of this sewer is unquestionably the most pressing need in the Department.

Summary.

The Board would respectfully request favorable consideration of the following items for special appropriation:

1. The completion of a sewer, draining the section in the vicinity of Island and Fountain Avenues with necessary incidentals. Expense $2,550.00.
2. The regrading, refilling and surfacing of Summit, Island, Meadow, Oak and other avenues. Expense $500.00.
3. The construction of a guard rail along Meadow Avenue. Expense $200.00.
4. The continuation of the examination of titles to the property adjoining the Ward One burial-ground, with a survey of the ground. Expense $300.00.
5. The purchase of about one hundred tons of red stone dust for surfacing. Expense $200.00.

GEORGE S. SAUNDERS,
WILLIAM A. BERTSCH,
CHARLES O. WELCH,
NATHAN C. LOMBARD,
JOHN H. H. McNAMEE,
HERBERT A. CHASE,
Board of Cemetery Commissioners.

REPORT OF THE SUPERINTENDENT OF PUBLIC BUILDINGS

OFFICE OF THE SUPERINTENDENT OF PUBLIC BUILDINGS,
CITY HALL, CAMBRIDGE, December 1, 1898.

To the Honorable the City Council of the City of Cambridge:—

GENTLEMEN: — In compliance with the requirements of Section 2, Chapter 13, of the City Ordinances, I have the honor as Superintendent of Public Buildings, to submit the thirteenth annual report of this department.

During the year 1898, the number of building permits issued by this department was less than in 1897, but it is gratifying to note that the quality of the buildings has improved when compared with those of the year previous. Property owners have erected buildings which are more commodious and substantial and which will be a credit to our City in future years. The inexpensive and undesirable tenement-house construction which has been noticeable during the last few years has given way to a better class of construction. Owners have begun to realize the wisdom of building substantial buildings and are building more modern structures.

While the number of permits granted has been less, the duties and responsibilities of the Superintendent have not been lessened. The construction of the new school buildings being constructed by the City has required and received a great deal of time and daily inspection. This department with its present force could be profitably employed in the supervision of the buildings owned by the City and I am confident that very soon the City will realize the need of increasing the force of this department in order that a more thorough supervision of our buildings may be made. This suggestion is in the line of economy, for with an increase of time for the general supervision much better results may be obtained. A great deal of time is necessary to attend properly to the repairs on our buildings as will be noted by referring to the tables of amounts expended for such work, and especially to those buildings where an unusual outlay was made necessary.

City Hall.

The usual repairs have been made on the City Hall building the past year, but during the coming year an increased expenditure will be made necessary by the absolute necessity of relaying a portion of the basement floor with some material more substantial and lasting than the present wood floor. It is a pleasure to note that those who have in charge the care of this building have been ever on the alert to keep everything in proper order and conscientious in the discharge of their duties.

City Building, Ward One.

The surroundings in the rear of this building were such as to warrant protests from the occupants and consequently during the summer the shed in the rear was removed, the yard graded and a fence built which afforded much needed protection and greatly improved the surroundings. Changes and repairs were made in the building to make the approach to the Armory less public. The upper stairways were enclosed by sheathed partitions in order to keep the public from the upper portion of the building when it was in use for military purposes. The amount expended on repairs in this building was $1,085.90.

City Building, Ward Four.

The sanitary arrangements in the Armory of this building have been improved and additional heating facilities provided for the patrol wagon quarters. These changes together with the general repairs have made necessary the expenditure of $1,287.72.

Bath House.

This building is in very bad condition and requires a large outlay in order to keep it in a condition which would warrant its use and make it safe for bathers. In my report of last year I recommended that an appropriation be made of $3,000.00 for building a new building but for lack of funds available this amount was not allowed. I would strongly recommend that careful consideration be given to this matter this year and that action be taken to increase the bathing facilities in this City. Unless something is done in this line no place will be available for bathers, as I do not feel warranted in continuing the use of the old bath house; its timbers are badly decayed and will not allow of much repairing.

The total number of baths during 1898 was 14,500.

The	average	number	per	day	in	Juue	was	192
"	"	"	"	"	"	July	"	194
"	"	"	"	"	"	Aug.	"	161
"	"	"	"	"	"	Sept.	"	46

These figures indicate the necessity of providing proper bathing facilities. The cost of repairs during 1898 on this building was $626.29.

Care and Repair of City Buildings.

CITY HALL.

For Fuel	$1,178 35
Electric lighting	959 70
Gas	111 95
Repairs	1,205 05
Supplies	608 49
Janitor	1,200 00
Engineer	1,350 00
Fireman	730 00
Watchman	730 00
Sundry labor	2,363 09
Total	$10,436 63

WARD ONE BUILDING, BRATTLE SQUARE.

For Fuel	$ 756 27
Gas	529 91
Lighting tower clock	100 00
Repairs	1,085 90
Supplies	138 45
Janitor	1,398 99
Total	$4,009 52

WARD FOUR BUILDING, CENTRAL SQUARE.

For Fuel	$ 415 15
Electric lighting	199 00
Gas	112 39
Repairs	1,287 72
Supplies	114 04
Janitor	1,398 99
Extra labor	143 50
Total	$3,670 79

POLICE DEPARTMENT.

Police Station 1, Brattle Square	$ 50 17
Police Station 2, Central Square	250 08
Police Station 3, Fourth Street	904 46
Total	$1,204 71

FIRE DEPARTMENT.

Engine House, No. 1, Brattle Square	$ 2 25
Engine House, No. 2	24 78
Engine House, No. 4	54 71
Engine House, No. 5	4 15
Engine House, No. 7	4 56
Chemical House, No. 1, Western Avenue	163 18
Chemical House, No. 2, Lexington Avenue	388 35
Total	$641 98
Miscellaneous	$1,857 60

School Houses.

The amount of money appropriated for new school buildings during the past year has exceeded the amount of any year since my connection with this department. With this additional amount has come additional duties and responsibilities. This report can only give one a feeble idea of the amount of time, study and anxiety which is made necessary in arranging the details of construction in these new school buildings. To the Superintendent of Public Buildings, this added responsibility has come with renewed force during the past year. I have given careful study to the different improvements which are constantly coming up, which tend to make the modern school building both convenient and attractive, a fact which does not necessarily imply extravagance, as will be seen if a careful inspection of our new buildings is made. I have practised economy almost to a point where it seems a question whether it is wise or not to try to build such large buildings and not apply a

larger portion of the appropriation to beautifying the exteriors, but my chief aim has been to make the buildings convenient for both pupils and teachers. Too much attention cannot be given to the planning of a school building; if possible, I should endeavor to give at least a year's time to the preparation of the plans of the school building. This could only be made possible by an appropriation which would allow for plans being made in advance.

Constant improvements are being made in the methods of heating and ventilating public buildings. The strong comparison which is noticeable between our new school buildings and the old in this respect would justify the parents of the pupils in making a loud protest against the means of heating and ventilation in our old buildings. These pupils are compelled to spend several hours a day in school-rooms which have practically no means of forcing out the vitiated air and substituting fresh air. This question, it seems to me, becomes one of the most important ones which we have to consider when we think of the effect that it must have on our City's pupils.

While speaking of this subject I desire to call your attention to the conditions existing in some of our school buildings.

The Washington School stands out prominently as one which needs attention. The State Department has made a careful inspection of this building and reports that it is in a very unhealthy condition. Considering the condition, construction and location of this building as at present, I would strongly recommend that a new school building be constructed in the vicinity of Ware Street and that the City dispose of its present property when the new building is ready for occupancy. My principal reason for this recommendation is that the present building cannot be modernized without a large outlay of money and even then it would be difficult to obtain satisfactory results, the construction being such as to make a rearrangement of the rooms impracticable.

Another reason is that the location does not accommodate the majority of the pupils. They reside largely in a district, the centre of which is east of Harvard Square near Ware Street. I would therefore renew my recommendation of last year that the use of this building be discontinued in the near future.

The condition of the Dana School on Centre Street has been outlined in previous reports and I cannot report any improvements in its condition during the past year. I would recommend the same disposition of this building as of the Washington School, except that a new building be built on the same site.

The Otis School in Ward Three contains eight class-rooms, four on the first floor and four on the second. I cannot report too forcibly on the dangerous condition of this building in case a fire should break out during school hours. Attention has been called to this matter for two years past, and a careful inspection made in reference to making alterations and improvements in this building. After a thorough study of the subject I feel justified in recommending the abandoning of this building and the erection of a new one in its place. The conditions which exist there make it unwise to attempt to remodel the present building without expending a larger sum of money than the results obtained would justify.

Felton School, Ward Two.

I would respectfully recommend that the entrance to this school building be changed and placed on the Summer Street side, and that the present staircases be removed and replaced in the centre of the building. This would bring a school-room on each side of the entry. As at present, in order to get to the rear of the building it is necessary to pass through the front room, which arrangement is very inconvenient, as well as annoying to teachers and pupils..

I would recommend that the above changes be made during the coming summer, and that the sanitary arrangements be placed in the basement and the present ones in the yard removed.

New School Houses.

There are in process of construction at the present time in the City four new school buildings. The total amount appropriated for the construction of these buildings, including the appropriation for land for the Roberts School and the amount reappropriated for the completion of the Latin School exclusive of furnishings, was $302,606.38, of which amount $131,263.66 has been expended. This leaves a balance of $171,342.72 to be reappropriated for completing the contracts which are at present under way.

The work upon the Ellis, Roberts and Peabody Schools was begun during the early Spring and is now progressing in a satisfactory manner, a detailed account of which may be found in the report on each of these buildings separately.

School House, Ward Two.

The lot on which this building is situated was formerly owned by the heirs of Samuel Palmer and contains 16,400 square feet. An order was passed by the City Council December 18, 1897, and approved December 29, 1897, authorizing the Superintendent of Public Buildings to purchase a lot of land in Ward Two, the same to be used as a site for a new school building. The price to be paid for the lot was not to exceed the sum of $12,000.00.

In accordance with this order the Superintendent of Public Buildings secured the land as heretofore described, at a cost of $12,000.00 and all necessary papers were passed on January 7, 1898. The selection of the above lot was made after His Honor the Mayor, and the School Committee had been consulted and their approval obtained.

The buildings which were situated on the land were offered for sale at public auction, held on February 26, 1898, and were bought by G. W. Phiney for the sum of $50.00. The buildings were removed from the lot in the early part of April and immediate steps taken toward the erection of the new building.

On December 7, 1897, an appropriation was made of $48,000.00 and approved December 31, 1897. The working drawings were prepared and estimates were called for to be in the hands of the Superintendent of Public Buildings on April 30, 1898. In response to the call sixteen firms submitted estimates for the erection of the building, ranging in price from $48,500.00 to $59,928.00. None of the estimates submitted were within the sum appropriated and consequently all bids were rejected.

Certain changes were made in the plans and specifications in order to reduce the cost of construction and new estimates were asked for, in response to which thirteen estimates were received, ranging in price from $47,175.00 to $59,351.00. The average estimate was $52,192.25. The second set of estimates was rejected for the same reason as the first and further changes were made in the plans and specifications.

An additional appropriation of $2,000.00 was made by the City Council on June 7, 1898, and approved June 15, 1898. Estimates were again called for and bids were received ranging from $47,146.00 to $51,950.

The lowest estimate was submitted by Lord Bros. of Boston, Mass., and the contract was awarded to them for the sum of $47,146.00. The work on the building has progressed satisfactorily and judging from the present state of affairs the building should be completed by the time specified in the contract, namely, on or before June 1, 1899.

The plans and specifications were furnished by George A. Moore, architect, a resident of this City, with offices in Boston.

The building has a frontage of 130 feet on Harvard Street and a frontage of 87 feet 10 inches on Winsor Street. The entrance for girls is on Winsor Street, while that for the boys is at the other end of the building, from a yard entered from Harvard Street.

In its exterior design the central portion of the building is carried up three stories with side wings of two stories in height, treated in a plain and substantial manner, devoid of much architectural effect except in its general mass and outline. The projection of the central and higher portion is emphasized by a plain pilaster treatment on a high base formed by the full height of the first story. With this exception, the other façades are plain and simple.

An innovation or departure from usual school-house designs is made, in that the architect has abandoned all roof effects by boldly finishing the design with a flat roof, believing that solidity and substantial results may be achieved as well without them, independently of the considerations of economical construction.

The materials used on the exterior are plain red brick, with limestone, terra-cotta and metal trimmings, with the roof of the best composition of paper, tar and gravel.

Within the building are the following accommodations:—

In the Basement: Two large play-rooms with the necessary toilet arrangements, bicycle rooms, heating and ventilating plant, with boilers and fuel bins sufficient for a season's supply of coal. From the basement easy access is had to the yards in the rear.

On the First Floor: Six school-rooms, together with a large recitation room.

On the Second Floor: Six school-rooms, a Master's room, library, Teacher's room, and a large storage closet.

On the Third Floor: A large Assembly Hall, with stage and connecting anterooms. This hall is lighted not only from the exterior walls, but has in addition two large skylights.

The interior finish is to be of cypress, with hard pine floors, and the building will be thoroughly equipped with wire screen, wardrobes, bells, speaking tubes, and the minor conveniences which characterize the furnishings of a first-class school building.

Ellis School.

A lot of land containing 25,700 square feet was purchased in June, 1897, for the purpose of erecting a grammar school building. The plans and specifications for such a building were prepared by Aaron H. Gould of Boston, Mass., and estimates were called for, to be in the hands of the Superintendent of Public Buildings on or before April 5, 1898. In response to this call twenty-eight estimates were received, ranging from $49,990 to $70,638.

After a few changes were made in the plans and specifications the contract to construct the building was awarded to Messrs. F. G. Coburn & Co. of Boston, Mass., for the sum of $48,000. The construction of the building was begun promptly, and has progressed without interruption, so that it is safe to predict the completion of the building in the early spring of '99. This building contains twelve school-rooms, each being 28 feet in width and 32 feet in length. On the third floor there is an Assembly Hall which will have a seating capacity for 600 people.

This Hall is provided with a stage in connection with which are ante-rooms which lead directly into the stairway halls.

Two rooms for Teachers and a room for the Master are provided which are fitted with all the modern conveniences. The completion and occupation of this building will greatly relieve the crowded condition of the schools in this district and will provide the City with another modern and finely equipped building.

Addition to the Peabody School.

The original portion of this school was constructed in 1889 and contained six rooms. The plans were such as to allow for an extension of the building at some future time. The time having arrived when additional accommodations were required, an appropriation of $40,000.00 was made by the City Council and approved by the Mayor, this amount to be used for an addition of eight school-rooms and an Assembly Hall. In order to construct this addition it was necessary to carry out the original design of the architect. This made it more expensive than would have been the case if the building could have been built on lines more modern as well as more pleasing architecturally.

If the building could have been built without regard to the original design the cost would have been lessened and greater accommodations provided. The heating and ventilating system of the original part was unsatisfactory and the cost of maintenance larger than in any of the other buildings of the same size. In order to provide a satisfactory heating system it was necessary to rearrange the system of sanitation and the ventilating of the same.

The system introduced consists of two 76 horse-power boilers which furnish the heat for the entire building. The class-rooms are provided with indirect radiation while the halls and cloak-rooms are provided with direct radiation.

The plans and specifications were prepared by Mr. George Fogerty. Estimates were called for and eighteen bids received, ranging in price from $43,650.00 to $57,528.00. All of these estimates were rejected, none of them being within the amount appropriated. A revision of the plans and specifications was made in order to reduce the cost and a second set of estimates was received ranging from $39,000.00 to $44,559.00. An additional appropriation of

$2,000.00 was made by the City Council on May 3, 1898, before the contract was awarded. The lowest estimate was submitted by Henry McGahey who was awarded the contract.

The work of construction was begun promptly and is fast approaching completion. This building should be ready for occupancy by March 1, 1899.

New Latin School.

In my last annual report I referred in detail to this building, describing in full the arrangement of rooms and the mode of construction. The construction of this building is still under way and from the present state of affairs it is safe to predict that the building will be ready for occupancy in the early spring of '99. It may seem to those who have not visited this building personally that it has taken an unusually long time to construct it, but a careful inspection of the building is alone necessary to make one realize the immense amount of work which has been done there.

The workmanship in every line in this building is second to none in this City at least, and when entirely completed the citizens of Cambridge will have every reason to feel proud of the new Latin School building. At the present time the finishing touches are being applied throughout the building and the heating and ventilating plant is in working order. Everything is being done by this department to expedite the completion and all requests are being cheerfully complied with by the contractors, Messrs. John S. Jacobs & Son, whose work and attitude from the beginning has been very gratifying to this department.

Taylor School, Ward Three.

When this school building was erected no provision was made for grading the lot and otherwise making the surroundings attractive. The conditions which existed were not as they should be and constant complaints were sent to this department by the surrounding property owners, that the grounds were being used as a rendezvous for people of all classes and a dumping-place for all kinds of débris.

In my estimate for the care and repairs of school buildings for the year 1898, I included a sum sufficient to construct a fence around the grounds, grade the lot, build new sidewalks and provide curbs. Under the supervision of the Superintendent of Parks this work has been accomplished in a very satisfactory manner. A tight board fence six feet in height was built on the dividing line, and on Charles and Vine Streets and Lowland Avenue an iron fence four feet high was built.

The sidewalks and curbing were put in under the direction of the Superintendent of Streets and was done in a thorough and satisfactory manner. I desire to make note of the commendable way in which surrounding property owners have acted during the progress of this work. Not one complaint has been received that would indicate any damage or inconvenience to surrounding property since this work has been finished. The amount expended for this work was $1,442.45: $446.60 of this amount was used for grading, $504.00 for the fences, $471.85 for sidewalks and curbing. I feel that an inspection of the work done here will satisfy anyone that for the amount expended, the results have been most satisfactory.

Repairs on School Buildings.

Putnam School.

The walls and ceilings of the corridors, class-rooms and coat-rooms of this building have been entirely renovated and covered with a coat of tinting. The woodwork has been revarnished and the entrances and grill work have been repainted. The amount expended on this work was $717.50.

Webster School.

In this building quite extensive repairs have been made. The woodwork in some of the rooms has been regrained, the walls tinted and the toilet rooms in the basement repainted. The floors in two rooms have been relaid and certain partitions removed so that more light could be obtained in the hallways. The sash throughout the building have been reputtied and drawn in color.

One of the class-rooms has been provided with new furniture. The total amount expended for these repairs was $1,106.18, of which $171.09 was applied to the purchase of new furniture.

Shepard School.

The amount expended for repairs on this building was $646.26, $461.14 of which was expended for painting, tinting and varnishing and the balance of $185.12 for repairs on boilers and pipe covering.

Morse School.

The total amount expended on this building for repairs and new furniture was $783.43, of which $494.73 was applied to painting, tinting and varnishing. The sum of $288.70 was expended on new furniture, some of the old being in such a state that it was unwise to repair it.

Wellington School.

In order to relieve the crowded condition of this building a room has been finished in the basement for the use of the school. During the warm months the wooden voting booth was placed in the yard and was used for a class-room, and was evidently appreciated by both teachers and pupils.

Gore School Building.

This building became so crowded that it became necessary to finish a room in the hallway of the third floor. This room is used by the principal as a special class-room.

The demand on this department for this kind of work is constantly made during the year, and not being able to anticipate the extent of such demands the cost of such must be taken from the appropriation for the care and repair of school buildings. With this fact in view it is hoped that a liberal appropriation for this work may be made the coming year, to take care of these additional calls for increased accommodations which are sure to arise.

In order to provide for these additional calls the past year, I have been unable to do as much on the other school buildings as the condition of them would warrant and at the same time keep within the appropriation. Several of the school buildings will need extensive repairs during the coming year in order to keep them in a comfortable condition for occupancy.

Harvard School, Ward Two.

The total amount of money expended on this building was $187.47. The work done consisted of painting and revarnishing woodwork.

Dunster School, Ward One.

The school furniture in this building was in need of repairs, and was smoothed, refilled and polished. The amount expended was $151.50.

Reed School, Ward Five.

New furniture has been placed in some of the rooms of this building at an expense of $272.00.

Thorndike School, Ward Three.

In this building adjustable seats and desks were provided at an expense of $309.58.

The supervision of the heating and ventilating of our City Buildings has been carefully looked after by Mr. E. B. Dale, who has had charge of this special work for the last three years. The results of this supervision have been most satisfactory.

In Mr. Dale's report to this department he calls especial attention to the reduced consumption of coal in some of the school buildings of the City. He also predicts a further saving on account of changes in radiation in some of the buildings.

Comparing the consumption of coal in the thirty-eight school buildings of the City in 1898, with the same in 1897, it will be noticed that an actual saving has been made of 69 tons of coal in 1898. The amount of coal consumed in these thirty-eight buildings, together with that consumed in the Russell School, was 2,518 tons, 135 tons of which was burned at the Russell School. The amount burned in 1897 in these same buildings with the exception of the Russell School, which was not then occupied, was 2,452 tons. Thus only sixty-six tons of coal more was consumed in 1898 than in 1897, with one more building to supply. This showing is certainly gratifying and proves that with proper supervision and instructions to janitors the cost of care and repairs may be materially lessened.

Mr. Dale also calls attention to the systems of heating in the Harvard and Washington School buildings and recommends that an appropriation be made to improve the plants in these buildings. In this recommendation I heartily concur so far as it applies to the Harvard School, the conditions there being serious and needing immediate attention. The system of heat ducts in this building is dangerous and contrary to the statute law. They are made of matched boards and I would recommend that they be removed and galvanized iron be substituted.

Owing to the uncertainty of the future use of the Washington School building, I do not feel justified in recommending any additional appropriation for repairs on this building. Should this building be continued for school purposes an unusual expenditure will be necessary, which under the existing conditions would be impracticable.

The following is a table showing the amount of coal consumed in the various school buildings: —

	Tons.
Agassiz	50
Allston	70
Boardman	51
Cushing	15
Corlett	10
Dunster	25
Dana	15
Felton	35
Gannett	40
Gannett (old)	15
Gore	60
Harvard	100
High	280
Holmes	15
Lassell	25
Latin	85
Lee Street	30
Lowell	26
Morse	175
Otis	30
Carried forward	1,152

	Tons.
Brought forward	1,152
Parker	50
Peabody	60
Putnam	160
Quincy	18
Reed	23
Riverside	27
Russell	135
Sargent	28
Shepard	75
Sleeper	75
Stearns	25
Tarbell	35
Taylor	100
Thorndike	85
Washington	80
Webster	135
Wellington	140
Willard	75
Wyman	40
Total	3,518

Real Estate Belonging to the City.

SCHOOLS.

Buildings.	Location.	Feet of Land.	Valuation.
Agassiz	Sacramento St.	19,689	$24,000 00
Allston	Boardman St.	15,193	34,600 00
Boardman	Winsor St.	10,018	16,500 00
Bridge	Pioneer St.	4,646	1,900 00
Corlett	Holworthy St.	10,000	4,000 00
Cushing	Cushing St.	14,787	4,500 00
Dana	Centre St.	14,317	6,300 00
Dunster	Concord Ave.	10,000	6,000 00
Felton	Amory St.	15,090	10,500 00
Gannett	Jefferson St.	15,434	15,000 00
Gannett (old) / Wellington	Columbia St.	27,673	50,300 00
Gore	Gore St.	9,900	29,000 00
Harvard	Inman St.	20,494	56,000 00
High	Broadway	74,366	238,000 00
Holmes	Hilliard St.	11,182	10,500 00
Lassell	Charles St.	10,000	10,500 00
Latin	Fayette St.	37,828	55,900 00
New Latin School	Trowbridge and Ellery Sts.	79,759	45,000 00
Lee St.	Lee St.	10,100	15,000 00
Lowell	Lowell St.	12,033	9,500 00
Morse	Brookline St.	25,650	80,000 00
Otis	Otis St.	8,270	16,000 00
Parker	Broadway	12,329	26,000 00
Peabody	Linnæan St.	21,813	35,000 00
Putnam	Fourth St.	14,400	74,300 00
Quincy	Mason St.	8,469	15,000 00
Reed	Reed St.	12,000	5,200 00
Riverside	Putnam Ave.	11,198	8,000 00
Russell	Larch St.	33,073	45,000 00
Sargent	Broadway	9,995	7,000 00
Shepard	Massachusetts Ave.	14,755	37,000 00
Sleeper	Dudley St.	21,284	29,000 00
Stearns	Harvard St.	10,050	8,000 00
Tarbell	Grigg St.	19,500	12,000 00
Taylor	Charles St.	23,592	45,000 00
Thorndike	Thorndike St.	10,027	34,000 00
Washington	Brattle St.	14,951	35,000 00
Webster	Upton St.	25,839	59,000 00
Willard	Niagara St.	20,079	30,000 00
Wyman	Rindge Ave.	14,347	9,500 00
New Schoolhouse Lot	Norris St.	25,700	6,200 00
New Schoolhouse Lot	Harvard and Winsor Sts.	16,400	12,000 00

CITY BUILDINGS.

Buildings.	Location.	Feet of Land.	Valuation.
Ward One	Brattle Sq	16,153	$76,000 00
Ward Four	Central Sq	13,028	60,500 00
City Hall	Massachusetts Ave	47,878	272,000 00
Station Four	Massachusetts Ave	6,516	10,000 00
Station Three	Fourth St	4,220	22,100 00
Engine House No. 2	Massachusetts Ave	10.000	34,000 00
" " No. 3	Third St	10,100	23,000 00
" " No. 4	Massachusetts Ave	9,532	29,000 00
" " No. 5	Inman Sq	6,000	15,000 00
" " No. 6	River St	4,994	14,500 00
" " No. 7	Main St	9,400	19,300 00
Hook and Ladder No. 2	Portland St	11,931	15,000 00
Chemical No. 2	Lexington Ave	15,262	14,500 00

Schoolhouses.

Schools.	Fuel.	Light.	Repairs.	Supplies.	Extra Labor.	Janitor.	Totals.
Agassiz	$300 69	$12 42	$179 18	$128 17	..	$625 74	$1,246 20
Allston	311 41	278 64	166 90	59 98	..	428 76	1,245 69
Boardman	216 53	75 22	224 96	50 93	..	625 74	1,193 38
Corlett	45 28	..	102 53	4 00	..	234 66	386 47
Cushing	70 41	..	142 79	1 65	..	234 66	449 51
Dana	75 43	12 39	208 13	9 75	..	295 43	601 13
Dunster	109 37	..	252 33	81 13	..	495 40	938 23
Felton	182 94	13 46	275 10	8 55	..	295 43	775 48
Gannett	167 80	30 05	127 46	4 90	..	469 32	799 53
Gannett (old)	..	28 34	35 25	40	..	495 39	559 38
Gore	270 40	25 14	902 95	66 10	..	732 00	1,996 29
Harvard	528 83	41 72	1,052 03	97 81	..	1,042 90	2,763 29
High	1,613 86	362 12	650 77	127 80	$202 26	1,800 00 808 24	5,565 05
Holmes	71 45	76	189 56	8 55	..	351 03	621 35
Lassell	135 98	..	93 92	1 55	..	365 00	596 45
Latin	399 00	11 61	285 27	24 10	..	852 57	1,572 55
Lee Street	183 22	22 07	140 52	10 80	..	730 00	1,086 61
Lowell	111 15	35	190 60	24 20	..	312 87	639 17
Morse	769 07	3 64	824 38	402 75	..	1,042 90	3,042 74
Otis	127 50	7 10	358 96	20 75	..	625 74	1,140 05
Parker	224 24	7 38	127 69	90 08	..	521 48	970 87
Peabody	385 56	5 16	74 63	48 22	22 50	666 00	1,202 07
Putnam	702 15	144 41	985 84	84 87	..	1,042 90	2,960 17
Quincy	75 66	22	67 40	30 45	..	312 87	486 60
Reed	107 08	..	149 88	273 75	..	365 00	895 71
Riverside	121 89	..	236 66	19 05	..	338 95	716 55
Russell	606 82	8 25	202 65	249 41	..	730 00	1,797 13
Sargent	129 77	137 92	131 22	8 75	..	428 75	836 41
Shepard	325 25	54 22	1,033 34	7 49	..	730 00	2,150 30
Sleeper	349 99	..	153 53	13 90	..	645 99	1,163 41
Stearns	153 10	33 07	57 72	9 35	..	295 62	548 86
Tarbell	154 68	..	84 13	37 62	..	338 95	615 38
Taylor	481 30	7 45	1,483 12	1,166 97	..	730 00	3,868 84
Thorndike	380 83	116 39	187 28	342 95	..	730 00	1,757 45
Washington	364 51	72 22	133 15	149 31	..	587 55	1,306 74
Webster	617 70	368 79	1,608 04	181 58	..	938 58	3,714 69
Wellington	684 75	11 47	846 13	266 44	..	495 39	2,304 18
Willard	329 65	25 49	178 01	174 63	..	730 00	1,437 78
Wyman	188 34	..	176 59	42 00	..	417 16	824 09
All Schools	53 92	191 35	127 28	1,931 99	740 55	108 00	3,153 09
	$12,127 51	$2,108 82	$14,447 88	$6,262 68	$965 31	$24,016 97	$59,929 17

Plumbing Department.

Mr. Charles H. M. Hunnewell, Plumbing Inspector, makes the following report:—

Number of inspections made	2,028
Number of permits issued	758
Number of jobs found defective or otherwise not in accordance with the plumbing ordinance	55
Number prosecuted for violation of ordinance	1
Number of master plumbers registered	41
Number of master plumbers licenses granted	9
Number of journeymen plumbers licenses granted	6
Master and journeymen plumbers licenses renewed	28
Number of permits cancelled	8
Amount received for license fees	$35.00

Inspection of Buildings.

The following is a table showing the number of inspections made by this department and the character of alterations ordered when the Inspector's services have been required in the interest of public safety and the proper enforcement of the building ordinance:—

Inspection of private buildings	1,860
Inspections on City Buildings	1,218
Inspection of chimneys	417
Inspection of buildings to be moved	7
Foundations condemned	4
Defective conductors and gutters	12
Dangerous chimneys	4
Using soft brick in foundation walls	3
Furnace pipes too near woodwork	17
Chimneys condemned	5
Woodwork too near chimneys	11
Buildings too near line of adjoining lot	6
Buildings condemned and ordered torn down	2
Buildings in a dangerous condition	9
Faulty construction of fire places	5
Building without a permit	5
Permits cancelled	7
Number of complaints for violation of ordinance to Police Court	2
Number of convictions	2

The following table shows the number of permits granted in each ward for buildings, etc., and the use for which they were intended:—

Buildings.	WARDS.				
	1	2	3	4	5
Additions	30	32	10	22	25
Alterations and repairs	19	21	12	19	14
Carriage houses	7	8	10	9	6
Chimneys	....	....	1	1	....
Dwellings	36	35	3	18	50
Dwellings and stores	2	3	1	3	1
Factories	....	....	1	2	....
Foundations	4	10	4	5	9
Heating apparatus	8	7	....	4	4
Stables	3	2	3	4	6
Stores and offices	2	6	2	7	4
Storehouses	1	1	5	4	3
Miscellaneous	20	11	5	13	8
	132	136	57	111	130

Of the foregoing permits, 535 were issued for wooden structures and 31 for brick and stone, making a total of 566.

Apartments	8	*Brought forward*	20
Apartments and stores	2	Home	1
Bakeries	2	Laundry	1
Boiler Houses	2	School Houses	3
Church	1	Shop	1
Dining Hall	1	Society Building	1
Dormitories	1	Stable	1
Factories	2	Storage	2
Gymnasium	1	Store	1
Carried forward	20	Total	31

Number of permits granted for each month during the years 1897 and 1898: —

	1897	1898
December	35	31
January	33	19
February	25	17
March	62	65
April	98	50
May	58	52
June	79	71
July	62	54
August	45	49
September	57	53
October	61	52
November	55	53
Totals	670	566

Cost of Buildings for the Year 1898.

	Ward 1.		Ward 2.		Ward 3.		Ward 4.		Ward 5.		Totals.	
	New.	Repairs.	New.	Repairs.	New.	Repairs.	New.	Repairs.	New.	Repairs.	New.	Repairs.
December.....	$27,400	$2,400	$7,500	$2,620	$1,600	$1,200	$2,800	$2,350	$5,800	350	$45,100	$8,920
January.....	50	....	4,650	5,750	....	10,000	5,000	1,700	5,100	160	14,800	17,610
February.....	800	500	....	2,800	200	1,000	2,000	4,400	150	100	3,150	8,800
March.....	165,350	900	51,685	1,150	3,060	125	46,675	390	14,600	950	281,370	3,515
April.....	69,000	3,775	34,000	2,225	....	400	....	425	25,075	3,200	128,075	10,025
May.....	90,000	10,025	14,725	985	11,200	50	....	1,525	75,525	1,925	191,450	14,510
June.....	212,200	13,050	4,000	5,650	100	2,900	37,950	650	11,300	1,975	265,550	24,225
July.....	26,520	21,250	13,000	5,310	....	3,400	42,700	2,085	54,200	2,325	136,420	34,370
August.....	28,125	2,805	77,000	2,725	4,040	300	93,600	620	17,000	350	219,765	6,800
September	....	1,200	20,800	2,350	11,100	25	9,200	2,725	20,350	2,700	61,450	9,000
October	200	4,900	10,925	775	500	1,080	37,025	1,640	31,100	900	79,750	9,295
November.....	....	2,025	30,175	3,500	3,900	200	4,500	4,275	21,750	500	60,325	10,500
Totals.....	$619,645	$62,830	$268,460	$35,840	$35,700	$20,680	$281,450	$22,785	$281,950	$15,435	$1,487,205	$157,570

In conclusion, I desire to say that it is a pleasure to recall the cordial relations existing between the various Committees and this department, the support given me by your Honorable Body, the consideration given to subjects identified with this department, for which I desire to return my hearty appreciation and grateful acknowledgment for the kindly spirit and feeling manifested.

To the Commtttee on Public Property, the members of which have been ever ready to assist and advise in all matters pertaining to the work of this department, and to His Honor the Mayor, I desire to express my sincere appreciation of the valuable assistance rendered me during the past year.

Respectfully submitted,

WM. H. GRAY,

Superintendent of Public Buildings.

REPORT OF THE SUPERINTENDENT OF LAMPS

Office of the Superintendent of Lamps.

Cambridge, December 1, 1898.

To the Honorable the City Council: —

I have the honor to submit herewith the annual report of the Lamp Department for the year ending November 30, 1898: —

The amount appropriated	$70,000 00
Transferred to the Inspection of Wires	800 00
Balance unexpended	17 80

The principal amounts expended are as follows: —

For Arc lighting	$50,803 59
Incandescent	10,323 16
Welsbach gas	7,679 81
Carriage hire	38 00
Painting lamp-posts	33 00

Expenses for electric lighting have been as follows: —

Arcs.

Amount of bills rendered	$52,091 87
Amount of deduction for outages	1,288 28
Amount expended for arcs	$50,803 59

Incandescents.

Amount of bills rendered	$10,562 94
Amount of deduction for outages	239 78
Amount expended for incandescents	$10,323 16

Welsbach Gas.

Amount of bills rendered	$7,714 11
Amount of deduction for outages	34 30
Amount expended for Welsbach gas	$7,679 81

The number of hours in which one or more lamps have failed to burn is: —

	Hours.
For arc lamps	32,207
For incandescent	23,978
For Welsbach	3,430
Total outages	59,615

	Maintained by Lamp Department.		Park Dept.	Bridge Dept.
	1897.	**1898.**	**1898.**	**1898.**
Arcs	498	515	..	17
Incandescents	297	363	..	42
Welsbach Gas	259	266	..	..
Naptha (Welsbach)	....	....	35	..
Gas (old burners)	23	....	..	..
Oil	21	....	..	..
	1,098	1,144	35	59

Total Street, Park and Bridge lamps maintained in this City on November 30, 1898 1,238

During the past year three different trips were taken at night by the Lamp Committee and your Superintendent, and those localities visited where lamps were desired. In consequence of these trips only five petitions for new lamps and four petitions for relocations remain on the files of the Lamp Committee.

In a great number of cases the petitioners ask for increased illumination. It is the opinion of your Superintendent that such should not receive the consideration that those petitions receive for lamps where none are now located. Morcover public streets should receive preference over private ways in the matter of illumination, and especially is this true where such private ways answer no purpose as public thoroughfares.

There are two great factors which render the lighting of this City expensive as compared with many others. These are the numerous shade trees that are found in this City, and also the very irregular arrangement of streets. It is perfectly evident that a lamp placed at the intersection of two through streets will light both ways on each street, but such is not possible in a very large number of cases in this City, as the streets do not cross each other as cited above. One street instead of crossing another will only lead into it and a few feet further another street running in the same general direction as the former will lead out of it. This latter street of course will need an additional light, as it will receive no light from the lamp at the intersection of the streets formerly mentioned.

Street lights may be said to have two distinct functions, namely, a primary one of furnishing sufficient illumination for public travel, and a secondary one of police protection. It is for the latter reason that many persons desire to have a light and especially an arc lamp located near their premises. While such is undoubtedly desirable in many instances, yet nevertheless, it is inexpedient on account of the expense involved.

This department maintains three distinct types of lamps as follows: Arc, Incandescent and Welsbach Gas lamps. Each of these has its relative advantages and its suitability must be determined for each specific case. The arc lamps are the so-called 1,200 candle power and burn 3,900 hours per year. The annual expense per lamp is $100. The incandescent lamps are of 40 candle power and burn under the same schedule at a cost of $30 each year. The Welsbach gas lamps are of 60 candle power and burn 3,700 hours per year at a cost of $29.88 per lamp per annum.

At the present time all the bridge lamps and the Welsbach naptha lamps located on Sections F and G of the Charles River Parkway are maintained by the Bridge Department and Park Department respectively. This department

however, maintains arc lamps on Cambridge Field, Cambridge Common, Rindge Field and Broadway Common, as well as some incandescents in the latter case. It would seem that in order to be consistent this department should maintain all or none of the Park lamps.

On January 31st, this City experienced a storm which compelled the extinguishment of all the electric lights at 11.30 P. M. in order to prevent accident to life and property. It was not until the evening of February 9th that the wires were in such a condition that it was considered safe to turn the current on to the street lights. Fortunately for the City the weather was clear for the most part of the time with good moonlight, as February 6th was time of the full moon.

The outage for the past year amounts to 59,615 hours, of which 50,982 hours were due to the storm of February last. If the 50,982 hours storm outage and 3,430 hours of Welsbach outage be deducted from the total outage hours, there will remain 6,603 hours of outage for the arcs and incandescents for the year. This 6,603 is against 9,616 of the year previous. This decrease is due undoubtedly to the fact that this year the Cambridge Electric Light Company has maintained a man at their station at night to start all lamps that are reported out by the police. The police themselves have orders to report through the patrol box as soon as they discover a light out. This report is then transmitted to the electric light station and a man is sent to immediately fix the lamp.

Were it not for the deduction made for outages amounting to $1,562.36 there would have been no money in the appropriation to install any new lamps. The lamps now installed will require for their maintenance alone a considerable increase in the appropriation for this department the coming year.

To the Chairman and members of the Lamp Committee, I wish to extend my thanks for the courtesy shown me the past year.

Respectfully submitted,

CHARLES F. HOPEWELL,

Superintendent of Lamps.

REPORT OF THE INSPECTOR OF WIRES

OFFICE OF THE INSPECTOR OF WIRES,

CAMBRIDGE, December 1, 1898.

To the Honorable the City Council: —

I have the honor to submit herewith the annual report of the Department for the Inspection of Wires. This report embraces also the work done on the Fire Alarm and Police Signal Systems, as the Inspector of Wires, by virtue of his office, is superintendent of these two branches of service.

Inspection of Wires Within Buildings.

The number of inspections made of the electric light and power wires within buildings of this City the past year was 112 against 162 for the year previous. The number of visits required to properly examine a wire installation of course varies, but is far in excess of the number of inspections listed. The National Electrical Code of rules and requirements for electric wiring has been adopted and enforced by this department. The total capacity of 16-candle power lamps installed during the past year was 5,578. The total rated horse power of motors installed was 79. The total capacity, is of course, far in excess of any actual consumption at any one time.

Electric Wiring in Public Buildings.

During the past year the Hampshire Street Stables of the Street Department were rewired by men of that department under the direction and supervision of a man furnished by this department. Whenever requested so to do, this department has cared for the bells, batteries and all other electric apparatus in the City buildings, but has been reimbursed for both labor and material furnished in the above cases.

At the request of Mr. William H. Gray, Superintendent of Public Buildings, your Inspector took charge of the installation of all electric apparatus in the New Latin School. This embraced both the revision of the architect specifications and the supervision of the work of installation. In the latter he was aided by Mr. Walter Littlefield, the supervising architect.

The general arrangement of the wiring is as follows: The building is wired for 772-16 candle power incandescent lamps, controlled by 129 switches. The number of outlets in the building is 429. The wires are drawn into an iron pipe conduit system and are thus mechanically protected. The building is wired for a voltage of 104 with a maximum drop in potential from the entrance to the farthest lamp of less than 3% at full load. A special circuit was

also run to feed the Chemical and Physical laboratories for experimental purposes.

The Blodgett system of electric clocks and program bells are installed. This system consists of a large self-winding master clock, wound by means of electric batteries, which electrically controls forty other dials in the different rooms of the building. The hands on these dials are moved once every minute by impulses sent by the master clock and during the remaining time are locked in position. All clocks must therefore be in accord. Connected with the master clock are four program movements by means of which the forty program bells in the building may be sounded as desired. Two of these program movements are to supersede the present unsatisfactory program arrangements of the English High School.

A complete telephone system of 39 stations is provided, whereby any teacher can communicate with the Secretary's office and by her consent with any other room. The system installed is the Whitman & Couch three wire, central station, central battery system. Individual generators and batteries are thus dispensed with and only a central battery maintained. Provision has also been made so that the principal can communicate with any room without the assistance of the secretary.

Your Inspector also drew up the specifications for the wiring in the addition to the Peabody School and supervised the installation of the same. This building is wired for 187 lights and extra capacity is allowed in the mains for 65 additional lights in case it should be deemed advisable, at some future time, to wire the old part of the building.

February Blizzard.

This City experienced during the evening of January 31st and the morning of February 1st, an unprecedented snow storm and blizzard. The storm commenced during the day and gradually grew worse towards evening and did not abate until daybreak. The atmospheric conditions were such that the snow froze on the wires wherever it struck and remained so for several days. An ordinary No. 9 galvanized wire about 1-7th of an inch in diameter was coated with ice until its diameter was from 1½ to 3 inches.

At 11.30 P. M. the Electric Light Station was shut down as their wires were continually being crossed by telephone and other wires. Their own wires also commenced to fall about this time. At 9 P. M. the fire alarm and police signal systems, except in District 2, commenced to open and by midnight practically all the fire alarm and police circuits, with the exception of Station 2, were out of service and so remained until the next day. During the day of February 1st, nine out of the ten box circuits of the Fire Alarm System were secured and about 97 out of 110 boxes were in operation. It was about a week, however, before all the City wires were in operation and then only in a temporary manner. It was about two months before the wires were again in normal working condition. One alarm only, however, was missed and that was from box 431 pulled at about 8 A. M. on February 1st. Several alarms, including one second, were received and sent out during the week.

Current was not turned on to the City lighting circuits until the 9th instant, as it was considered unsafe to do so until the telephone and other low potential wires were taken out of the way.

The Electric Railway Company on account of their good pole line and construction, which was mentioned in last year's report, were able to maintain current practically uninterrupted on their lines all night and were not compelled to shut down.

A large number of both the Electric Light and Telephone Company's poles were blown down, while in a number of cases cross-arms were broken off.

This storm involved an additional expense of $1,045 to this department not including the services given by members of this department.

Fire Alarm System.

Again this year must I call the attention of the City Council to the obvious need of a new Central Fire Alarm Station, as well as providing for the burial of the wires of the Fire Alarm and Police Signal Systems.

The Fire Alarm Station should be located in a fireproof building if possible and in a central location, which in the opinion of your Superintendent, should be convenient to the City Hall. The customary arrangement for such a station is to build a three-story Fire Department headquarters building, reserving the third story for the fire alarm system. In addition to this sufficient room on the ground floor must be furnished for their wagons and supplies.

The Fire Alarm Station is, of course, where all the fire alarm wires centralize. This centre of distribution should therefore coincide as nearly as is practicable with the geographical centre of the City. At the present time, before the City wires are buried, this centre of distribution should be accurately determined, in order that when the fire alarm wires are placed underground they can be systematically and economically installed. If this is not done then, a large and unnecessary expense will later fall upon the City for failure to make such a provision.

The storm of last February testifies to the absolute necessity for the burial of the City wires. As the City now possesses between 14 and 15 miles of duct, located on the principal thoroughfares in the City, this placing of the wires underground should not be delayed.

During the past year many details of the fire alarm system have received attention and been improved, but no large or expensive changes made as the appropriation did not permit of such.

All of the fire alarm boxes have been given two coats of red paint and one of varnish. They have also been equipped with telephone jacks for telephonic and testing purposes.

The central station has been partially rewired in order that the relays installed there should be placed under glass cases and protected from dust. A new fast-time repeater has been built in the central office by Mr. Francis Axtman of this department. It is similar to the slow-time repeater and uses for its operating mechanism the movement of an old Gamewell gong. Since its final adjustment on August 14th, it has not failed on an alarm. The placing of the relays under glass and the installation of this new fast-time repeater has remedied to a very great extent the troubles that were experienced with operating the fast time satisfactorily. We still experience trouble on those circuits from losing our supply of current at the central station. Although only lost a second it still gives us a blow on those circuits. This would be remedied by the substitution of storage batteries in place of our motor generators.

The telephone switchboard at the central station has been rewired with

twin wire and also twisted pair cables run from this board to the basement and the tower where our telephone curcuits enter. This has materially reduced the induction trouble on those telephone circuits.

The coming year will probably see the removal of the telephone pole lines on Green Street and Cambridge Street. Both of these lines carry one eight-pin cross-arm belonging to the City and on which every pin is utilized. The removal of these poles will entail considerable expense to this department as it will necessitate the transfer of the City wires to some other line. At the present time your Superintendent knows of no other pole line on those or parallel streets which have sufficient spare pin capacity to carry all of these wires. The removal of the above mentioned poles may necessitate the placing of some at least of the City wires underground on Cambridge Street and on Massachusetts Avenue.

No extensive repairs or renewals will be necessitated on the City lines as far as known at present, except as above mentioned. Your Superintendent has given considerable attention to the outside line construction of the fire alarm and police signal systems for the past three years, with the result that the line troubles have enormously diminished and are relatively of a small amount, for the amount of wire possessed by the City. The induction troubles however, may and will, if they continue to increase, necessitate a considerable expense for twin wire to take the place of our bare wire as run at present.

The total number of bell alarms sounded the past year, exclusive of the "no school" signal and military call, was 139. This includes five second and one general alarm. This was 18 less than last year and 73 less than in 1896. In addition to these there were five "no school" and one military call sounded.

Again this year must your Superintendent renew his recommendation of the past two years for the purchase and installation of a storage battery system in the Central Fire Alarm Station. This has not yet been possible on account of lack of the necessary appropriation. An installation of this battery in place of our present motor generators would, by dispensing with the need of maintaining our gravity batteries, save a large annual expense. The present gravity batteries are expensive to maintain both as regards materials and labor required in comparison with storage batteries. The latter system would also prevent the stray blows on our fast time which are due almost entirely to the momentary loss of current from our motor generators.

Your Superintendent would also recommend the substitution of reverse current magnets in place of the direct current magnets in the fire alarm strikers and whistles that are not at present so equipped. This would obviate the need of relays and local batteries which are at present responsible for almost all failures of the strikers.

Sufficient appropriation should be made the coming year to permit the installation of the fire alarm boxes listed on the fire alarm cards, but as yet not installed. In many cases also it is desirable that keyless doors be placed on our boxes, as it would prevent a delay in sounding an alarm.

Police Signal System.

During the past summer a new time stamp, manufactured by the Automatic Time Stamp Company, was purchased and installed in Station Two. This is giving good satisfaction and is made in an approved form over the same make as installed in Stations One and Three.

Considerable trouble has been experienced the past year with induction on our police circuits after the City street lights were turned on. Transposing the wires even at every pole seemed to have little effect in some cases and resort was made to twin wire. This improved the service and entirely remedied it in most cases. This twin wire involved considerable additional expense to this department, but it could not well be avoided. New telephones have been installed in the boxes, but as yet no satisfactory transmitter has been found although a large number of different kinds have been tested. Your Superintendent has found that transmitters which operate satisfactorily when inside of buildings would not operate on the street but would pack. This is due to the vibration of the poles to which the boxes are attached. This probably can only be absolutely remedied by mounting the police boxes on separate pedestals, as is customary with underground connections.

All the police boxes in District 1, half of those in District 2 and a few in District 3 have been taken to the office where they were taken apart and thoroughly cleaned, the movements nickle-plated and rewired. The wiring has been simplified and made as uniform as possible. New telephone hooks have been provided in the Municipal boxes, and new receivers and cords in all the boxes. They have also been painted two coats of paint and varnished so that a box goes out on to the street practically as a new box. In consequence of this an increased efficiency must result. This work will be continued with the remaining boxes.

One of the most essential parts of the police signal system, yet the most difficult to secure, is telephone service between the patrol boxes and the police stations. Notwithstanding how good an instrument we may have at both ends, we cannot secure such service in this City with the present system of overhead wires spaced as they are about 14 inches apart and in close proximity to the electric light wires, and especially the arc wires. To secure good service it becomes necessary to use ariel cables and the cheapest kind that is at all satisfactory is twin wire which costs $125 per mile. To equip our system would require 21 miles and would cost for wire alone $2,685, which amount would go far towards placing them in underground cables where they properly belong.

More police boxes are urgently needed in certain localities and sufficient appropriation should be made the coming year to permit the installation of the same.

Pole Lines.

The past year has seen no pole lines of any considerable length set in this City except two on Belmont Street from Holworthy Street to the Belmont line. This street has had a pole line installed on each side on account of the requirements of the electric road whose tracks were laid on that street the past summer. On the south side was placed a wooden pole line by the Cambridge Electric Light Company and on the north side an iron pole line by the Boston Elevated Railway Company. This arrangement, in addition to such requirements as necessitated by the Electric Railway Company, permits the furnishing of electric lights to the residents of that district as well as electric street lights without an additional set of poles being hereafter located.

Such other poles as have been set in new locations have been almost entirely on account of the installation of new street lamps. Many poles have been set

W.5
W.1
W.2
W.3
W.4
RESH POND
KINGSLEY PARK
GLACIALIS
COMMON
CAMBRIDGE FIELD
CHARLES RIVER
Conduit map of the
CITY of CAMBRIDGE
New Eng. T. & T. Co. conduit laid in 1888.
New Eng. T. & T. Co. conduit laid in 1898.
West End St. R. R. Co. conduit laid in 1897.

in old locations to replace such as were found to be decayed. Also many were reset on account of the blizzard of February last.

Conduits.

In 1888 the New England Telephone and Telegraph Company built 11,616 feet of conduit. This conduit was laid the entire length of the present Main Street and on Massachusetts Avenue from Harvard Bridge to Pleasant Street and on Pleasant Street from Massachusetts Avenue to Western Avenue.

In 1897 the West End Street Railway Company (now the Boston Elevated Railway Company) laid a conduit the entire length of Boylston Street, on Massachusetts Avenue from Brattle to Cambridge Street, the entire length of Peabody Street, on Winthrop Street from Boylston Street to Eliot Square, and on Mt. Auburn Street from Boylston Street to Putnam Square. The total length of conduit laid was 6,236.3 feet.

This year the New England Telephone and Telegraph Company laid 55,196 feet of conduit on fifteen different streets, as shown in the accompanying tables.

The Boston Elevated Railway Company's conduit allowed that company to take down a large number of overhead feed wires on those streets through which the conduit was laid. It did not, however, remove a single pole from the streets of this City.

While the Telephone Company has a conduit the entire length of Main Street, nevertheless they maintain a pole line on that street from Third Street to Portland Street. From there the pole line goes across private property to State Street where it parallels Main Street. This same pole line on Green Street also parallels Massachusetts Avenue, from Sidney Street to Putnam Avenue.

The Telephone Company this year obtained conduit location on 37,834.5 feet of street out of a total length of conduit of 55,196 feet on streets on which they had no pole line. This 37,834.5 feet of conduit represents this year's extension of the telephone system in this City. This taken together with the length on Bridge Street and Broadway, on which the poles of that company are to be allowed to remain, gives a total length of 42,911 feet out of 55,196 feet of conduit which will not require the removal of a single pole. The total number of poles that can be removed under the conduit order, if we except Bridge Street and Broadway as mentioned, is 95. Of these 95 poles some will undoubtedly be required for outlet or distributing poles. The City has, however, by special agreement with the Telephone Company, obtained the removal of the Green Street line the coming year. This line has 34 poles, and in addition to the 95 poles as mentioned gives as a maximum number of telephone poles that can be removed from the streets of this City as 129. The number actually removed will be less.

The Telephone Company has already petitioned the City Government for 236 pole locations on streets where they have at present no pole lines. These poles are to serve as distributing poles in connection with their conduit system. In about 200 cases these poles are not necessary as they can make use of the poles belonging to the Electric Light Company. These two companies have an agreement between them for such joint use of poles and the City should compel the Telephone Company to use such poles wherever it is possible to do so. If the City does not insist on the removal of all poles as far as

s practicable, the inevitable result will be that there will be more poles with the conduit system than before it was installed.

At the present time there is 13.8 miles of conduit laid in this City of which 12.6 miles is owned by the Telephone Company. With the following exceptions, namely, Fayerweather Street and short lengths of Winthrop, Appleton, Inman, Magazine, First and Holyoke Streets there are one or more pole lines on the streets where conduits are laid. In other words there are one or more pole lines on all streets where conduits are laid, except for about 3-4 of a mile out of a total of 13.8 miles. On about 8.3 miles there is a double pole line used jointly by two or more companies and on 4.3 miles a single pole-line. The street railways require two lines of poles unless an underground electric cable system or centre of street pole-line construction is employed. The railways themselves, however, need only a 25-foot round iron pole not exceeding 8 inches in diameter at the butts. There is, however, quite a difference between these poles and the joint poles now set in our public streets, varying from 35 to 60 feet in height and from 10 to 18 inches at the base and carrying numerous wires. Not only is this manifest in appearance but in public safety.

The Cambridge Electric Light Company who possess more poles than any other company in this City have as yet made no arrangements for placing their wires underground.

The actual work of laying the telephone conduits has been done with probably as little inconvenience to the public as possible and at the same time it has been well and expeditiously done. The company will undoubtedly try to replace the streets as well as it is possible to do so, but of course it is impossible to put them back in as good condition as before without fixing the entire street. The company has acceded to all requests of your Inspector for City outlet connections as far as they have been made for the company themselves. This underground system should permit good telephone service to be given to the citizens of this City.

Notwithstanding the good work of the telephone company in laying their conduits your Inspector believes the fallacy of such individual installation of conduits is well shown already in this City. Such a method has been shown to be imperfect in many other cities of this country.

This method permits the monopolization of the sub-surface of our streets when taken in connection with the other sub-surface requirements. For example, take Mt. Auburn Street, which has at present no car tracks from Massachusetts Avenue to Boylston Street. Here are to be found one sewer, one gas, two water mains and two conduit systems. In the near future the elevated railroad will require abutments on each side of the street which will require about 3½ feet of street from each curb. These different pipe systems with their numerous manholes, which generally occur in groups at street intersections, taken in connection with the fact that each has been laid out without any reference to future requirements will make it very difficult to place the electric light wires underground even on that street.

AXATION STATISTICS ON MUNICIPAL PUBLIC SERVICE STREET USING CORPORATIONS FOR THE YEAR 1897.

Compiled by Charles F. Hopewell, Inspector of Wires, Cambridge, Mass.

	TELEGRAPH.					ELECTRIC LIGHT.						STREET RAILWAYS.							GAS.				AUTHORITY.		REF.
REMARKS.	Annual tax on poles and conduits.	City's right to space for top cross-arm.	City's right to one free duct.	Competition.	REMARKS.	Annual tax on poles or conduits.	City's right to space for top cross-arm.	City's right to one free duct.	City's discount on public building lighting.	Competition.	Under supervision of State Commission.	REMARKS.	Annual tax per car.	Annual tax on poles or conduits.	City's right to space for top cross-arm.	City's right to one free duct.	Public uniformed officials ride free.	Pay, if cross-bars kept in repair by Company where their tracks are located.	Free transfers given.	Under supervision of State Commission.	REMARKS.	Discount to city on metered gas.	Gas for city street lights at reduced rates.	Price of gas to household-ers per 1000 cubic feet.	Competition.	Under supervision of State Commission.	NAME.	OFFICIAL POSITION.	
nnual registration tax $100. By Struwger Co.	$1.00 Yes	No No	No	Yes Yes	Annual registration tax $100.	$1.00	No Yes	No	No No	No No	No No	Annual tax $5 per mile of wire.	$25	$1.00 Yes	No	No	Yes Yes	Between rails and 1 ft. No.	Yes	No No		No No	No	1.25	No No	No			
nnual license tax $100. nnual registration tax $50. ires and poles taxed as personal property. [petition	No No Yes Yes No	No Yes Yes No	None None None No	Yes Yes Yes No	Annual license tax $50. Annual registration tax $100. Wires and poles taxed as personal property.	No No Yes No No	No Yes Yes No Yes	None None None No	Free No Yes 50% No	No No No No	No No No No	Annual registration tax $50. Wires and poles taxed as personal property.	$2 No No Yes No	No No Yes Yes *	None None None	Police Yes Yes *	Pave 11 ft. Between rails.	Yes Yes Yes Yes	No No No Yes	Three companies, two do not give transfers. Wires and poles taxed as personal property. *Yes, but by no legal rigbt.	No No No No	None None None	1.25 1.75 1.00 1.50 1.60	No No No No	No No No No	W. E. Young W. T. F. Donald G. A. Collier E. H. Herrling	Mayor Mayor Mayor City Clerk	
dephone rate, granted on account of com- petition, $24. 6 free telephones.	No No	No No	No No	Yes No	Soon to have competition.	No No	Yes Yes	No No	No No	No No	No No		$15 No	No Yes	No Yes	Yes Yes	Yes. No	Yes Yes	No No	Soon to have competition.	No No	None None	1.60 1.70	No No	No Yes	L. S. Herrick	City Clerk	
ew Company has been granted franchise. Discount for privilege of building conduits.	No No	No Yes	Yes Yes	Yes Yes		No No	Yes Yes	None None	No No	No No *	No Yes	* None in street lights.	No No	Yes No	Yes Yes	None Yes	Police Yes	Part by special contract. Tracks and 18 in.	Yes Yes	No Yes		Yes Yes	Yes Yes	1.50 1.00-1.50	No No	No Yes	Jos. P. Maugan	Mayor's Clerk	See Note
Discount for privilege of building conduits.	No No	Yes Yes	None None	Yes Yes		No No	Yes Yes	None None	No 50%	Yes Yes	Yes Yes		No No	No Yes	No Yes	No Yes	Yes Yes	Tracks and 18 in. Tracks and 18 in. Between rails. Tracks and 2 ft.	Yes Yes Yes Yes	No Yes No Yes	State tax of $455.	Yes No	None None	1.00 1.00-1.98	No No	No No	H. E. Garfield Chas. Steimker Chas. E. Allen C. F. Hopewell	Mayor City Clerk City Clerk Inspector of Wires	
[year $44,000. Half of wires underground. ays City 3% of gross receipts. Amt. paid last	No No	Yes Yes *	No Yes	Yes No	* After March 28, 1898, on all poles erected.	No No	Yes Yes	No No	No No	No Yes	No No	Municipal Plant. Later franchises pay 3 % of gross receipts.	No No	No Yes	No Yes	No Yes	Yes Yes	Tracks and 18 in. Tracks and 18 in.	Yes Yes	No Yes	City officials receive car-tickets free. [per mile for st. sprinkling. [pd. for elec. ltg. Company pays $100 a year [$25,000 per year	No No	No No	2.75 1.00	No Yes	No No	Louis N. Ley Geo. B. Gurney Geo. D. Eldridge Edward D. Ellicott	City Clerk City Clerk Mayor City Electrician	See Note
Duct to be reserved. See Elec. Lt. remarks.	No No	Yes Yes	None Yes	Yes Yes	Pay a paving-tax.	No No	Yes Yes	None Yes	No 25%	No No	No No	* In some cases. City proposes to build a conduit system, and lease the same to tel., elec. lt. & st. R. R. Co's	$10 No	No No	Yes Yes	None Yes	Yes Yes	Between rails. Tracks and 18 in.	No Yes *	No No	* On two lines. See electric light remarks.	40%	None None	1.25	No No	No No	A. G. Goldsmith	City Electrician	
By Mntual Company. Pay 5% of gross re- ceipts. ** By Bell Company.	No No	Yes No	None Yes	Yes Yes		No No	Yes No	None No	40% No	No No	No No	Pays 2 % of gross receipts. Company gives 20 Pays electrician's salary, [16c.p. lamps free. $225 per year.	No No	No Yes	No None	No Yes	Yes Yes	Tracks & 1 ft. on paved sts.	No No	No No	One-tenth of 1/2 of receipts paid City.	No No	No No	1.25 1.49	No No	No No	M. H. Murphy Robert J. Saltsman	City Clerk Mayor	
City is now building conduits.	No No	No No	None Yes	Yes Yes	City is building conduits.	No No	Yes No	No Yes	No No	No Yes	No Yes	City is building conduits. Pole-tax received last year $2,200.	No $1.00	No Yes	No Yes	No Yes	Yes Yes	Yes. Tracks and 1 ft.	No Yes	No No	City is building conduits. Second Company just granted franchise. Pole-tax received last year $1,200.	10% No	Yes None	1.80 1.25	No No	Yes No	Walter A. Davis Henry C. Boyboff	City Clerk Comptroller	See Note
mount received for pole-tax $2,041.	$1.00	No	Yes *	No	* No conduits as yet.	1.00	Yes	Yes	No	Yes	No		Yes	No	No	No	Yes	Tracks and 18 in.	No	No		Yes		1.66	No	No	B. B. Paddock	Mayor	
[telephone for every business telephone. The N. E. T. & T. Co. install a free residence les taxed $2 by ordinance, but not collec- ible at present. anchise tax paid City $6,000 per annum. ense tax $25. ty has use of poles for electric llght.	No No No No No No No No	No Yes Yes No Yes Yes No Yes	No None No Yes Yes No Yes	Yes Yes Yes Yes Yes Yes No Yes		No No No No No No No No	No Yes No Yes No Yes No Yes	Yes None No No No No No Yes	33⅓% No No No No No No No	Yes No No No No No No Yes	No No No No No No No No	City has voted to purchase Elec. Lt. Plant. [ceived last year, $9,585.83. 5% of gross receipts paid City. Amount re- License tax $50. City owns one plant. Mnnicipal Plant.	No No No No No No No No	No Yes No No No No No No	No No No No No No No No	No No No No No No No No	Yes Yes Yes Yes Yes Yes Yes Yes	Tracks and 18 in. Between rails. Tracks and 18 in. Tracks and 2 ft. Tracks and 6 in. Between rails. Tracks and 18 in. Tracks and 1 ft.	No Yes No No No No No No	No No No No No No No No	[Amount paid last year $17.42. One-tenth of 1/2 of receipts paid City. City is building conduits. Second Company just granted franchise. Pole-tax received last year $1,200. [received last year $8,000. 2 % of gross receipts paid City. Amount * Between same lines but not between com- peting lines.	No No No 10% 15% No No No	None No None Yes Yes No No No	1.25 1.50 1.25 1.49 1.25 1.80 1.80 1.25	No No No No No No No No	No No No Yes No No No No	M. H. Murphy Robert J. Saltsman Walter A. Davis Henry C. Boyboff B. B. Paddock David Hall Frank E. Davis Joseph Dawson B. W. Davis D. W. Kenney S. H. Bracheen Thomas Taggart	City Clerk Mayor City Clerk Comptroller Mayor Supt. Elec. Dept. Mayor City Marshal Mayor's Clerk City Auditor Mayor Mayor	See Note
nual license tax $100. ale tax received last year $1,362.	No $0.50 No	No Yes No	No Yes Yes	Yes Yes Yes	Pole tax received last year $156.	No 50 cts. No	Yes Yes Yes	Yes Yes None	10% No 10, 15, 25%	No No No	Yes No Yes	Annual license tax $100. Franchise tax of 1/2 of 1%, amounting to $500. Pole-tax received last year $235. Annual license tax $250.	$25 No No	$0.50 Yes No	Yes None Yes	Yes Yes Yes	Yes No No	One-third. Tracks and 18 in. Tracks and 18 in.	$25 No No	$0.50 Yes No	Car tax received last year $600. Franchise tax 1/2 of 1%. * On some lines. Annual license tax $100.	25% No No	None None None	1.75 2.50 1.40	No No No	No No No	Wm. D. Doyle Lewis D. Lovering L. de V. Chaudron	Clerk of Committees Mayor City Clerk	See Note
nual license tax $150. [all the business. T. Tel. Co. capitalized at $25,000 does nearly ty $1 per box on every one used in City.	No No No	Yes Yes No	No None Yes	Yes Yes No	Annual license tax.	No No No	Yes No Yes	Yes No No	10% No 50%	No No No	Yes No No	[tric Light Co. have use of one duct. Conduit owned by telephone company. Elec-	No $22 No	No Yes No	No None Yes	Yes Yes Yes	Yes Yes Yes	Between rails. Tracks and 18 in. Between rails. Tracks and 18 in. Track and 18 in.	No $22 No	No Yes No	Car-tax received last year about $3,000.	No 50% No 20%	None 1.50 1.30 Yes	1.50 No No Yes	No No No No	P. P. Misner Patrick J. Boyle W. L. Hathaway	Recorder Mayor Mayor's Clerk	
1 in 5 free.	No No No No No No No	Yes Yes No Yes Yes No Yes	Yes No No No No No No	No None Yes No No No No	[pays a special paving-tax in front of R. Est. Co. allows City $1,000 worth lighting free. Also Company pays 4 % of receipts. Amount re- ceived last year, $472.80. Pay $2.50 per mile of wire. See Telephone.	No No No No No No No No	Yes No Yes No No No No No	Yes No No No No No No No	17% No No * No No No No	No No No No No No No No	Yes Yes Yes No Yes No No No		No No No No No No No No	No No No No No No No No	No No No No No No No No	No No No No No No No No	Yes Yes Yes Yes Yes Yes Yes Yes	Tracks and 18 in. Tracks and 18 in. Tracks and 18 in. Tracks and 2 ft. 1 fares Tracks and 18 in. Yes, All. Tracks and 1 ft.	No Yes * Yes Yes No Yes Yes	No No No No No No No	* On some lines. * Partially. [$265.55 for 5 months. Company pays 1½% of receipts. Paid last year Company pays 4 of 1 % of gross receipts. Pay a fixed fran- [Amount last year $397.22. chise tax of $2,000.	No No No No No No No	None None None None None None None	1.35 1.40-1.75 1.58 1.35 1.50-2.25 1.35 1.22	No No No No No No No	No Yes Yes No No No No	W. B. Randall H. I. Cade H. P. Field Mayor F. B. Farnsworth Mayor Jas. H. Adam Comptroller F. S. Ideson Comptroller John F. Adams Mayor W. D. Meisser Comptroller D. R. Walker Chief Electrical Bureau	Inspector of Wires Mayor Mayor Mayor's Secretary Comptroller Mayor	See Note See Note
Residence rate $18 per annum.	No No	No Yes	Yes No	Yes Yes		No No	Yes No	No Yes	No Free	No No	No No		$50 Yes	No No	No Yes	No Yes	Yes No		No No	No No		No No	No No					
le-tax received last year $36,049.50 from all ompanies.	$1.00 No	Yes Yes	Yes Yes	Yes Yes	Pay $2.50 per mile of wire. See Telephone.	$1.00 No	Yes Yes	Yes Yes	Yes Yes	No No	No No		No	No	Yes	Yes	Yes	Tracks and 18 in.	Yes	No	[Amount last year on 3% basis $26,810.86.	Yes	None	1.25 2.00	No No	No No	Chas. H. Randall Alonzo H. Dale	Mayor Chamberlain	
sy 1½% of gross receipts. Amount received last year $3,131.28.	No No No No No	Yes No No Yes Yes	Yes No No Yes No	Yes No Yes No No		No No No No No	Yes No No Yes No	Yes None No Yes No	Yes 50% Yes No No	Yes No No No No	Yes No No No No	Pay 3% of gross receipts. Amount received last year, $13,920.97. Pay a special paving-tax.	No No Yes * No No	No No Yes No Yes	No None Yes No Yes	No No Yes No Yes	Yes Yes Yes No Yes	Tracks and 18 in. Tracks and 1 ft. Tracks and 18 in. Tracks and 6 in. Tracks and 2 ft.	No Yes * No Yes * Yes	No No No No No	Paid 3% but now pay 5% of gross receipts. * $20 on each motor in service. Amount rec'd last yr. $280. [last yr. $630. *On same Co's lines. Co. pays tax on 60 cars at $10 and 6 at $5. Amt. 1 Co. pays 2% and another 5% of gross receipts. Under new Charter all franchises must be sold.	44% No Yes No	Yes Yes None Yes	1.10 2.00 1.15 2.10	No No Yes No	No No Yes No	Daniel F. George C. F. Knowlton Jacob Weldel Richard M. Taylor	Mayor's Secretary Commissioner Pub. Works Mayor Mayor	See Note
1 in four.	$2.00 No	Yes No	Yes Yes	Yes Yes		$2.00 No	Yes No	Yes No	No No	Yes No	No No		No No	No No	No No	No No	Yes Yes	Tracks and 18 in. Tracks and 2 ft.	No No	Yes No		Yes No	Municipal None	Plant 2.00	Plant No	No No	Chas. H. Randall Alonzo H. Dale	Chamberlain	
City rate. New Co. granted franchise. Paid City $1,100.	No No	No Yes	No None	Yes Yes		No No	No Yes	None None	20% No	Yes No	No Yes	Municipal Plant.	$15 * $10 Yes *	No No	No Yes	No No	Yes Yes	Tracks and 2 ft. Between rails.	Yes Yes *	No No	Pay 2% of gross receipts. Amt. last yr. $8845.85. * On some lines. 9 Companies. 1 Co. pays tax of $25 per car.	1½ Yes No	Yes None	1.75 1.50 2.00 1.15	No No Yes	No No Yes	W. B. Sullivan, Jr. Frank Olesou Geo. I. Vincent	Mayor's Clerk Sec. Board Public Works City Clerk	See Note
Postal Tel. Co. transmit City messages free.	No No No No No	No No No Yes No	No No No Yes No	Yes Yes Yes Yes Yes		No No No No No	Yes No No Yes No	None None None Yes No	20% No No No No	No No No No No	No Yes No No No		No $2.50 $5 * $15 *	No No No No	No No No No	No No No No	Yes Yes Yes Yes	Tracks and 18 in. Track and 1 ft. Between rails. Tracks and 18 in.	Yes No Yes * Yes	No No No No	* Amount received last year $100. [service). * Pay $375 on 25 cars out of 75 (in actual * On lines same Company.	No No	No None	.90 1.25 1.00 1.35	No No No No	No No No No	J. M. Good M. A. Riggs Nathaniel J. W. Fisb Reynold Voit	Mayor Comptroller Mayor Mayor's Clerk	
Other Companies $40. Special tax $500.	No No No	No No Yes	No None Yes	Yes No Yes		No No No	Yes Yes No	Yes Yes No	Yes No Yes	No Yes * No	No No No	Municipal Plant. [eantile only. License tax $100. *Amount received $1,138 on all poles. ** Mer-	No No No	No No No	No Yes Yes	No Yes * No	No No No	Tracks and 18 in. Tracks and 18 in. Between rails.	No No $50	No No Yes	[of personal property tax. * Pay paving-tax. 5 out of 9 Co's pay 5% of gross receipts in lieu * See Electric Light. License tax $100.	Yes No	None No	1.40 2.00	No No	No No	5 Companies. W. Donavan	City Clerk	
$100 License tax. * See Electric Light.	$0.50 *	Yes	Yes	Yes	$100 license tax. * See Electric Light.	.50 *	Yes			No	No	See Telephone.	No	$1.00 *	Yes	None	Yes	Tracks and 3 ft.	Yes	No	*See Telephone.	No	Yes	1.00	No	No	Harvey J. Wiley	Sec. Street and Sewer Dept.	
Pole-tax exempt where top cross-arm is used by City.	$1.00 No	Yes * Yes	None Yes	Yes Yes	* See Telephone.	$1.00 No	Yes Yes	Yes Yes	Free Yes	No No	No Yes	Municipal Plant.	No	No	None	Yes	Tracks and 18 in.	Yes	Yes	Operated by Electric Light Co.	No No	No No	2.00 1.15	No No	No Yes			
y has use of poles for electric lights. new conduit tax of 30 cents per yd. for first 4 les, 20 cents for each additional yard. Note.	No $2.00 No	Yes No Yes	Yes No No	Yes Yes No		$2.00 * No	No	No	Yes	No	No	Municipal Plant. Municipal Plant. * Lamp-poles excepted.	No $5 No $25 No	No No No	No No No	No Some Yes	Yes Between rails. Tracks and 2 ft. Between rails. Part.	Yes No Yes Yes	No Yes No No	Pay 9% of gross receipts. Amount paid last Car-tax received last year $3,175. See Note.	No No Yes	No No Yes	1.40 1.25 2.50 G	No No No	No No No	W. S. Carpenter Geo. W. Johnson F. H. Forbes R. L. Tullis	Deputy City Clerk Mayor's Clerk Mayor's Secretary	See Note See Note

Boston: One Gas Company pays ½ of net earnings after allowing profit of 8% on actual investment. The value of plant $1,000,000. One Gas Company allows 30%, two others 10%, the six remaining no per cent to the City. The Boston Pneumatic Co. pays ½ of 1% gross receipts, with an additional ¼ until 2½% is annually paid City. *San Francisco, amount received last year $6743.75.
Chicago Gas Co. pays 3½% on gross receipts. Amount received last year $88,291.24. Port Wayne Gas Co. pays 25 cts. on each 100 ft. of pipe. Omaha Gas Co. allows City 5 cts. per M. cu. ft. of gas sold. Providonce Gas Company pays 3% of gross receipts. Amount received last year $16,529.75.
Cleveland Gas Company pays 6¾% of gross receipts. Amount received last year $62,000. Little Rock Gas Company pays a franchise tax of $500. Oshkosh: 24 car-tickets for $1.00. San Francisco: New Company given franchise, contract to furnish $1.00 gas.
New Orleans: All companies pay a franchise tax of 2% on balance obtained by capitalizing dividends at 6% and subtracting value of tangible property. Street Railway Cos. paid last year $46,615.50. Gas Co., $19,013.14. Telephone tax in litigation. Baltimore Tel. Cos. paid conduit tax last year, $6,653.56. Baltimore will lay in 1899 a Municipal Conduit System for all wires at present overhead.

Municipal Conduits.

For three different years this City has petitioned the State Legislature for the right to build and operate a system of municipal conduits. These conduits to be built by the City and leased to the different companies, and thus the overhead wires with the exception of the trolley and long distance telephone wires were to come down. Unfortunately for this City such a bill failed to pass.

Two other cities, Washington and Baltimore, Md., have within a few years each appointed a commission to consider the best way of placing the wires underground, and in both cases they have recommended a general subway system to be owned by the city. Baltimore has accepted the report of their commission, and has already commenced work on a municipal conduit subway for all overhead wires. New York thus far has licensed only one company to put a conduit system in their streets, and the right is reserved to purchase that at the expiration of ten years.

Your Inspector would recommend that the City again petition the Legislature this year and appropriate sufficient money to properly lay the matter before them. Each year of delay in this matter only makes the condition of our streets the worse to contend with. The installation of such a system would not add to the tax levy, as it would be bonded, and the revenue derived from it would take care of the maintenance and interest and sinking fund.

The following tables show the number of feet of conduits, together with the number of duct feet already laid throughout the City, the streets on which they re located and the companies to which they belong: —

West End Street Railway Conduit laid in 1897.

Street.	From	To	Length.	Ducts.	Duct Feet.
Boylston St.....	Bridge.....	Power House.....	532.35	17	9,049.95
" "	Power House.....	Winthrop St.....	740.40	50	37,020.00
" "	Winthrop St.....	Mt. Auburn St..	174.10	40	6,964.00
" "	Mt. Auburn St.....	Brattle St.....	418.	26	10,868.00
Massachusetts Ave.	Brattle St..... ..	Opposite No. 1416....	140.70	26	3,658.20
" " .	Opposite No. 1416..	" No. 1430....	237.00	23	5,451.00
" " .	" No. 1430..	Church St.....	168.70	23	3,880.10
" " .	Church St.....	Cambridge St.....	660.00	20	13,200.00
Mt. Auburn St.....	Boylston St.....	Massachusetts Ave..	2,328.00	17	39,576.00
Peabody St.....	Massachusetts Ave.	Cambridge St.	470.70	8	3,765.60
Winthrop St.....	Boylston St.....	Elliot Sq.....	366.33	13	4,762.29
			6,236.28	....	138,195.14

New England Telephone and Telegraph Co's Conduit laid in 1888.

Street.	From	To	Length.	Ducts.	Duct Feet.
Main St.....	W. Boston Bridge..	Third St.....	1,695.50	4	6,782.00
" "	Third St.....	Massachusetts Ave ..	4,341.20	8	34,729.60
Massachusetts Ave	Harvard Bridge....	Blanche St.....	2,790.00	1	2,790.00
" " .	Blanche St.....	Main St.....	383.40	2	766.80
" " .	Main St.....	Pleasant St.....	1,752.80	15	26,292.00
Pleasant St.....	Massachusetts Ave.	Green St.....	274.10	9	2,466.90
" "	Green St.....	Western Ave.....	379.10	4	1,516.40
			11,616.10	....	75,343.70

New England Telephone and Telegraph Co's Conduit laid in 1898.

Street.	From	To	Length.	Ducts.	Duct Feet.
Appleton St.	Brattle St.	Concord Ave.	2,199.50	3	6,598.50
Boylston St.	Mt. Auburn St.		226.2	3	678.6
Brattle St.	Brattle Sq.	Willard St.	2,240.4	12	26,884.8
" "	Willard St.	Fayerweather St.	2,794.	10	27,940.
" "	Fayerweather St.	Mt. Auburn St.	1,705.9	9	15,353.1
Bridge St.	Craigie Bridge	Cambridge St.	1,123.	8	8,984.
Broadway.	Main St.	Columbia St.	42,62.2	8	34,097.6
"	Columbia St.	Inman St.	1,717.1	9	15,453.9
"	Inman St.	Cambridge St.	3,954.	13	51,402.
Cambridge St.	Bridge St.	Fifth St.	2,015.7	3	6,047.1
" "	Fifth St.	Portland St.	1,438.	4	5,752.
" "	Portland St.	Winsor St.	1,344.9	5	6,724.5
" "	Winsor St.	Inman St.	1,968.	6	11,808.
" "	Broadway	Kirkland St.	545.3	13	7,088.9
" "	Kirkland St.	Massachusetts Ave.	654.2	12	,850.4
Fayerweather St.	Brattle St.	Reservoir	756.8	2	1,513.6
First St.	Main St.	Bridge	177.	2	354.
Holyoke St.	Mt. Auburn St.		312.6	2	625.2
Inman St.	Massachusetts Ave	Broadway	1,449.8	20	28,996.
" "	Broadway	Cambridge St.	1,508.2	7	10,557.4
Kirkland St.	Cambridge St.	Oxford St.	510.6	2	1,021.2
Linnæan St.	Massachusetts Ave	Garden St.	2,276.7	3	6,830.1
Magazine St.	Massachusetts Ave	Putnam Ave.	2,957.9	3	8,873.7
" "	Pleasant St.	" "	2,524.1	15	37,861 5
Massachusetts Ave.	Cambridge St.	Linnæan St	3,031.2	12	36,374.4
" "	Linnæan St.	Arlington St.	601.3	10	6,013.
" "	Arlington St.	Huron Ave.	592.3	9	5,330.7
" "	Huron Ave.	Meacham St.	3,452.2	8	27,617.6
" "	Meacham St.	Dudley St.	750.7	7	5,254.9
" "	Dudley St	Arlington line	2,433.4	6	14,600.4
Mt. Auburn St.	Putnam Ave.	Holyoke St.	1,602.4	15	24,036.
" " "	Holyoke St.	Boylston St.	460.3	14	6,444.2
" " "	Boylston St.	Brattle St.	460.4	12	5,524.8
" " "	Brattle St.	Auburn Place	1,149.7	9	10.347.3
			55.196.	....	470,839.4

Total length of conduit of West End Street Railway Company laid in 1897.... 6,236.28 ft.
Total duct feet of conduit of West End Street Railway Company laid in 1897.. 138,195.14
Total length of conduit of N. E. Telephone and Telegraph Co. laid in 1888... 11,616.1 ft.
Total duct feet of conduit of N. E. Telephone and Telegraph Co. laid in 1888. 75,343.7
Total length of conduit of N. E. Telephone and Telegraph Co. laid in 1898.... 55,196. ft.
Total duct feet of conduit of N. E. Telephone and Telegraph Co. laid 1898... 470,839.4
Total length of all conduit in city..... 73,048.38 ft.
Total duct feet of all conduit in city..... 684,378.24

Revision of Ordinances.

Your Inspector obtained the past year copies of a large number of ordinances of different cities throughout this country. These were abstracted and furnished to the committee on revision of the City ordinances. In addition to these ordinances, much data was obtained on the method of taxation of the semi-public street-using corporations in the different cities, especially those companies who employ electricity in their operation.

These have been compiled and are respectfully submitted with this report and without comment, but with the hope that it will receive your earnest consideration.

In closing I wish to express my thanks to the different members of this department and others who lent their services during the past year, and especially during the February blizzard. I also wish to extend my thanks to his Honor the Mayor and members of the City Council for the consideration shown this department the past year.

Respectfully submitted,

CHARLES F. HOPEWELL,

Inspector of Wires.

REPORT OF THE TRUSTEES OF THE CAMBRIDGE PUBLIC LIBRARY.

To the Honorable the City Council : —

The trustees of the Public Library herewith submit their forty-first annual report, being that for the year ending November 30, 1898.

The full and ample report of the librarian and its accompanying statistics recall us readily to the day of small things, when the library was transferred nine years ago to its present building, and its whole system was reorganized and enlarged. The number of books at the time of its transfer was less than twenty thousand and the hope was expressed, in the report of 1889, that it would at some time reach forty thousand. The number this year is fifty-four thousand one hundred and forty-nine. The number of books taken out during 1888 was 86, 221 and the number is reported this year as more than double that number (176,795). The whole system of local and school deliveries has been introduced since that time, thus distributing over the whole city the conveniences which had before belonged only to the neighborhood of Central square. The East Cambridge branch library has been established and also the admirable institution of the children's room, which has been so successful as to create already a demand for additional space. The librarian has called attention to the fact that more room is needed for this purpose; and it requires only a careful inspection of the library to show that absolutely no space is wasted and that the demand for additional room is the legitimate result of success. The population of the city also is steadily on the increase, and it must be remembered that the utmost demand for additional space on the part of the library is but trivial when compared to the constantly recurring demand for school-houses. We must not grudge the expense which, after all, is an incident of municipal prosperity.

At another point the librarian's report offers a fact curiously contrasting with some of the fears created, even in the minds of our librarians, by the new departure of nine years ago in respect to freer access to the library. It is well known that our admirable head librarian of that day, Miss Hayward, trained in the careful methods of earlier librarians, felt much distrust when it was decided to open our reference collection of two thousand volumes to the direct contact with readers. Including both this and the library of local history the number of volumes now open to such contact cannot be less than 3,700, and yet it appears by the librarian's report that the whole number of books lost during the present year is but 17, of which trifling number it is very possible that some may yet come to light. This confirms the observation, now generally reported at all conventions of librarians, that increased confidence placed in the users of books is repaid by increased care and safety. The same thing is reported by school committees, whose testimony always is that the school-houses least in-

jured by pupils are those most nicely finished and most expensive in their structure.

The experiment of the branch library at East Cambridge continues to be entirely successful, as are the local deliveries, and we call attention to the valuable experiments being tried by Mr. Gifford in the direction of deposit collections and lists of selected books. It is altogether probable that great as has been the expansion of library systems, during the last few years, farther steps are yet to develop themselves, and we are satisfied that we possess a corps of librarians who will not be behindhand in introducing any new measures that will make our increasing collection of books more advantageous to the public. We feel, on the other hand, that this board of trustees has sufficiently won the confidence of the city government to make it willing to respond to such moderate demands in the way of increased appropriations as may be required by an enlarging population and the development of our educational system.

For the Trustees,

THOMAS WENTWORTH HIGGINSON.

REPORT OF THE LIBRARIAN

CAMBRIDGE, Mass., November 28, 1898.

To the Trustees of the Cambridge Public Library: —

GENTLEMEN: In my report two years ago I called attention to the growing need of more room in the stack. Since that time, the deposit collections, the establishment of the East Cambridge branch library, and the removal of some government documents have partially offset the additional space required by our new purchases. The lack of room, however, is apparent and is steadily growing more urgent.

Whenever the stack be extended, I hope it may be possible to provide a small space in the extension for the local and school department. It would greatly facilitate this part of our work, much of which has to be done within a very limited time, if it could be conducted in closer proximity to the books. Moreover, and still more important, the portion of the children's reading-room now enclosed within the rail, where the books for the schools and local stations are charged and discharged, is emphatically needed by the children. Each year the number of days increases when children have to be sent away solely for lack of room, and even this additional space will not make the reading-room large enough for all who wish to make use of it.

The crowding of the children's room renders it frequently necessary to be watchful lest the resulting overflow prove annoying to the occupants of the main reading-room. I hesitate somewhat to recommend a partition between these two rooms, both because they can be more easily supervised as they now are, and also because a partition might possibly detract from the architectural effect of the library interior. But it would distinctly add to the comfort of the frequenters of the main reading-room if the children's room were at least partially shut off; and accordingly I ask you to consider the advisability of erecting a partition to consist chiefly of glass.

I have previously called your attention to the poor condition of the cement floor in the basement, particularly in the wing occupied by the stack. A better floor in this part of the building would render the books in the basement less liable to injury from dampness, from which cause some of them have suffered seriously, especially during the last two summers.

I recommend the removal of the old shelves from the south wall of the local history room and the substitution of new shelving similar to that on the other walls. The books in the special library to which this room is devoted are increasing rapidly in number, and we shall need all the shelf-space obtainable.

Catalogue.

The classification of the library proceeds steadily, and satisfactory progress has been made during the past year. Miss Smith has been preparing the fic-

tion catalogue for the press, and the work is now practically completed. I hope we may find it possible to have the catalogue printed early in the coming year.

Nearly all our bound sets of periodicals have now been rearranged and recatalogued, and they are in a far more satisfactory condition than ever before. There still remain a few broken sets which I am desirous of completing whenever an opportunity may offer. Some of the older sets, particularly the *Popular science monthly* and the *Atlantic monthly*, contained many imperfect volumes. In nearly all instances these have been discarded and replaced by perfect ones. The expense of these changes has been small, outside the cost of binding; and the evidences of the increased usefulness of the books have more than warranted the outlay.

Cambridge Room.

We have continued to reserve from time to time in the Cambridge room a small number of books bearing on the subjects discussed by the Economy club. The members of the club have found these books of service and have made very satisfactory use of them. This part of our work has of late been in charge of Miss Smith, who has given it intelligent and careful attention. I should be glad if more demands for assistance of this kind might be made upon the library. For example, it seems to me that the teachers in the higher grades of the schools might often find it helpful to have a few books temporarily reserved for the use of their classes.

During the past year three exhibitions of photographs have been given in the Cambridge room, which, although not altogether well adapted, is the only room which can be utilized for this purpose. The photographs are small collections owned by, or loaned to, the Library art club, in which this library holds membership. The first collection was devoted to Venice. The club now has in preparation a set of photographs pertaining to Florence, and this collection, together with some others, will probably be exhibited here during the present winter. It may be well to add that the purposes for which the Cambridge room was set apart are in no way interfered with by this new use to which it has been put. On the contrary I am inclined to think that these exhibitions serve to introduce many people to the room and its contents.

Library Staff.

The gradual increase of work at the delivery desk, most noticeable in late afternoon hours when it is impossible for all the assistants to be on duty, has made it necessary to devise some way by which the public may be more rapidly served. There is need of an additional assistant to care for the registration at the busiest times and possibly to help in charging the books given out. It is somewhat difficult to detach any member of the staff from her regular duties for this purpose; but as we do not yet need the full time of another desk attendant, I shall try to make some rearrangement at once to meet the emergency. At the end of the present busy season we shall be able to determine more accurately in what way the additional help may best be supplied.

An assistant in the reading-room to help persons using the reference library and card catalogue would be of much service. People are often unnecessarily

reluctant to seek assistance from an attendant busy with other duties, even though the desired aid might be easily given. If you should deem it advisable to separate the two reading-rooms, it might prove necessary to make this addition to our staff at once. But in any case, although I do not urge it as an immediate necessity, I wish to call your attention to this desirable method of increasing the efficiency of the library.

The only change in the staff during the past year was caused by the resignation of Harold T. Dougherty, one of the evening attendants. His place has been taken by Harris S. Whittemore.

My thanks are due my assistants for the interest they have taken in their work, as well as for the thoroughness with which their duties have been performed.

Branch Library and Deposit Collections.

The results of the year's work at our branch library in East Cambridge have been gratifying. The circulation of books amounted to 17,697. This is particularly satisfactory inasmuch as the novelty of the new library has worn off and also because the branch has not received a large number of new books. There are many duplicate volumes which are naturally sent to branches when no longer needed at the main library. But popular books of the day, to the appearance of which people are looking forward, should be furnished promptly if they are to be of much use. In the purchase of duplicates of new books I have kept in mind the needs of the branch library, and its wants have been supplied as far as possible. The appropriation for the branch was practically used up by the expenses of administration and the bill for periodicals, so that nothing was left for new books and very little for rebinding old ones. But now that we have conducted the branch library for an entire municipal year, it will be possible to determine its requirements more accurately in estimating the expenses for the year to come. Mr. Henderson, who has been in charge of the East Cambridge branch from the beginning, has performed his work in a thoroughly efficient manner.

Our small deposit collections cause some falling off in the circulation through the local stations, particularly at the Prospect Union. So far as they go, however, I think these collections of books yield better results than the unsatisfactory method of reaching the library through the medium of the stations. A deposit in each local station, similar to that at the Prospect Union, would be very acceptable, particularly to those who are disappointed by failure to receive desired books from the main library. In some of the stations it would be difficult to obtain even the small space necessary for this purpose, and probably some of our present agents might find it impossible to give any more time to our work. But as requests for such loans of books are made from time to time, I think we shall gradually be able to increase the number of deposit collections, even though it may not prove feasible to utilize all the local stations in this way. The moderate extension of this field of work, such as I now have in mind, would cause little expense beyond the cost of further duplicating certain desirable books.

During the coming year I hope to prepare several lists of about fifty books each, selected to meet the more frequent needs of those who make use of the deposits of books. These lists will be numbered and printed. The books selected will form small traveling libraries, which may be transferred as a

whole from one place of deposit to another. As the lists will naturally comprise books in frequent demand, it will be necessary to purchase duplicates for this purpose. The project thus briefly outlined is little more than the systematizing of work which we are already doing, with the hope that the adoption of a more methodical plan may serve to enlarge its scope.

Circulation.

A gain of 14,031 has brought our total circulation for the year to 176,795. From the main library 5,990 more books have been issued than were given out last year.

The circulation through the local stations has fallen off decidedly, and in only one instance (Mr. Gove's station) has it increased. The decrease at the Prospect Union is 185, while on the other hand the deposit collection at this place shows an increased circulation of 963, — a significant indication of the usefulness of even a small local library. Including the East Cambridge branch, the entire local circulation has gained 7,664.

The school circulation seldom fluctuates widely and has this year made its customary small gain. The Putnam school continues far in the van and has taken nearly five hundred more books than last year, although it was well ahead at that time. Through the branch library and the Putnam school, East Cambridge is making at present a very satisfactory use of the public library.

The new Russell school, where we began to deliver books in October, 1897, has taken more books than any other except the Putnam. Mention should also be made of the fact that owing to the changes which are being made in the Peabody school building our deliveries there have been suspended since the beginning of the present school year. This accounts for the comparatively small number of books taken by a school which ordinarily stands among the first.

For other statistics I refer you to the tables accompanying this report.

Respectfully submitted,

WILLIAM L. R. GIFFORD,

Librarian.

APPENDIX I

General Statistics.

Total number of volumes in the library	54,149
Volumes added during 1898	3,635
Volumes condemned	2,598
Duplicates exchanged and sold	125
Volumes destroyed on account of contagious diseases	7
Volumes lost	17
Volumes bound	2,750
Postal cards sent for books overdue	5,687
Present number of card holders	20,244

Circulation.

	Central.	Local, including branch library.	Schools.	Total.
First Quarter	33,744	13,922	3,196	50,862
Second Quarter	32,420	12,778	3,004	48,202
Third Quarter	25,344	9,585	.....	34,929
Fourth Quarter	30,133	10,269	2,400	42,802
Total	121,641	46,554	8,600	176,795

Average per day (Central library)	399
Average per day (Local stations)	308
Average per day (Schools)	247
Largest issue (Central library) Feb. 19	956
Largest issue (Local stations) Feb. 5	317
Largest issue (Schools) March 4	493
Smallest issue (Central library) Dec. 14	164
Smallest issue (Local stations) July 18	62
Teachers' books drawn directly from library	1,688

Classified Circulation.

Classes.	Biography.	Current magazines.	Fiction, including juvenile fiction.	Foreign literature.	General works.	History.	Literature.	Science and arts.	Travels.	Total.
Central library	4,781	3,342	84,324	2,369	1,359	4,703	10,486	6,536	3,741	121,641
Local stations	888	197	18,750	447	366	832	1,358	1,247	991	*25,076
Schools	572	31	4,856	20	152	745	582	726	916	8,600
Total	6,241	3,570	107,930	2,836	1,877	6,280	12,426	8,509	5,648	155,317
Per cent	.04	.023	.695	.018	.012	.04	.08	.055	.037	

* The circulation of the East Cambridge branch and deposit collections, amounting to 21,478, has not been classified and was accordingly deducted before computing this table.

School Delivery.

Name of School.	Agassiz.	Allston.	Harvard.	Latin.	Morse.	Peabody.	Putnam.	Russell.	Shepard.	Sleeper.	Taylor.	Thorndike.	Washington	Webster.	Wellington.	Total.
Books delivered	28	803	335	137	373	382	1,825	1,189	201	438	478	568	728	204	911	8,600

Local Delivery.

Stations.....	Whalen.	Hunnewell.	Phillips.	Grant.	East Cambridge.	Gove.	Dow.	Prospect Union.	Deposit collections.	East Cambridge branch.	Total.
Books delivered	2,665	9,509	1,389	1,578	1,892	3,331	2,767	1,945	3,781	17,697	46,554

Additions (Including Replaced Books).

Source.....	City appropriation.	Citizens' subscription fund.	Cummings fund.	Fay fund.	Gifts.	By exchange.	Total.
Books.....	3,313	50	22	23	220	7	3,635

APPENDIX II

Amounts Received by the Librarian and Deposited with the City Treasurer.

	Fines.	Cata-logues.	Dupli-cates.	Paper stock.	Total.
December-February	$151 10	$1 00		$2 42	$154 52
March-May	129 59	....		5 20	134 79
June-August	145 03	....		....	145 03
September-November	121 16	....	$1 00	5 08	127 24
Total	$546 88	$1 00	$1 00	$12 70	$561 58

City Appropriation.

Appropriation		$19,000 00
EXPENDITURES.		
Binding	$1,240 71	
Books and periodicals	4,766 81	
Carrier	534 86	
Fuel	431 83	
Furniture	151 88	
Incidentals	561 58	
Insurance	180 00	
Lighting	1,173 50	
Local stations	401 66	
Printing	668 98	
Repairs	317 71	
Salaries	8,570 06	
		$18,999 58
Amount unexpended		$0 42

Special Appropriation for East Cambridge Branch Library.

Appropriation		$1,080 00
EXPENDITURES.		
Binding	$16 56	
Incidentals	9 25	
Lighting	29 68	
Periodicals	102 65	
Rent	200 00	
Salaries	720 66	
		$1,078 80
Amount unexpended		$1 20

Funds of the Trustees.

Citizens' Subscription Fund.

Balance December 27, 1897		$33 20
Interest on bonds		220 00
Interest on deposits		85
		$254 05

EXPENDITURES.

N. R. Campbell & Co.	$20 75	
T. H. Castor & Co.	41 03	
Houghton, Mifflin & Co.	25 00	
Wm. H. Hoyt, agent	3 00	
Library Art Club	5 00	
Little, Brown & Co.	66 00	
Geo. E. Littlefield	29 25	
Medford Historical Society	75	
Joel Munsell's Sons	5 00	
Prince Society	8 00	
Society for Psychical Research	5 00	
C. Osborne Ward	1 50	
J. T. White & Co.	8 00	
		218 28
Balance on hand, December 27, 1898		$35 77

Cummings Fund.

Balance, December 27, 1897		$88 10
Interest on bond		80 00
		$168 10

EXPENDITURES.

American Architect & Building News Co.	$ 15 00	
Bates & Guild Company	12 00	
Little, Brown & Co.	31 50	
Geo. E. Littlefield.	33 22	
J. B. Millet Company	30 00	
G. P. Putnam's Sons	20 00	
Bradlee Whidden	20 00	
		$161 72
Balance on hand, December 27, 1898		$6 38

Fay Fund.

Balance December 27, 1897		$42 72
Interest on bond		40 00
		$82 72

EXPENDITURES.

Burrows Brothers Company		80 50
Balance on hand, December 27, 1898		$2 22

APPENDIX III

Gifts.

		V.	P.
Aguilar Free Library Society, New York, N. Y.			1
American Agriculturist Library, Springfield			1
American Congregational Association, Boston			1
American Republics, Bureau of, Washington, D. C.			1
Ancient and Honorable Artillery Company, Boston		1	
Andover Theological Seminary			1
Argentine Republic		2	
Balch, *Mr.*, Philadelphia, Pa.		1	
Bancroft, *Mrs.* Hubert H.			1
Benton, J. H., Boston		1	
Birmingham (England) Free Library Commission			1
Boston, City of		2	
Boston Dispensary		1	
Boston Public Library		1	1
Boston Transit Commission		1	
Brookline Public Library		1	1
Brooklyn (N. Y.) Library			1
Brown, Francis H., Boston		1	
Brown, James S., Los Angeles, Cal.		1	
Cambridge, City of		1	2
Cambridge Young Women's Christian Association			1
Carnegie Library, Pittsburgh, Pa.			2
Chelsea, City of		1	
Chicago (Ill.) College of Law			1
Chicago (Ill.) Public Library			1
Cincinnati (Ohio) Public Library			1
Davis, Andrew MacFarland			2
Davis, James Clarke, Boston		1	
Davis, Walter A., Fitchburg		1	
Dayton (O.) Public Library and Museum			1
Dover (N. H.) Public Library			1
Edwards, W. J.		1	
Enoch Pratt Free Library, Baltimore, Md.			1
Everett Public Library			1
Fall River Public Library			2
Farquhar, David		1	
Field Columbian Museum, Chicago, Ill.			7
Fletcher Free Public Library, Burlington, Vt.			1
Forbes Library, Northampton			1
Foster, Francis Apthorp		19	
Freese, John W.		1	
Gifford, William L. R.		1	
Gilman, Arthur		3	
Green, Samuel A., Boston			1
Hall, *Mrs.* Lewis		1	
Hanna, H. H.		1	
Hartford (Conn.) Public Library			1
Harvard University		3	2
Hayes, *Mrs.* John S., Somerville		1	
Henderson, David B., Washington (D. C.)			1
Higginson, Thomas Wentworth	MSS.	5	

	V.	P.
Hildreth, John L.		1
Home Science Publishing Co., Boston	2	
Hucke, J., Berlin, Germany	1	
Huling, Ray Greene		1
Indian Rights Association, Philadelphia, Pa.		3
James, William	1	
John Crerar Library, Chicago, Ill.		1
Lake Mohonk Conference on International Arbitration		1
Lancaster Town Library		1
Lane, *Mrs.* C. M.	3	
Lawrence Free Public Library		1
Leicester Public Library		1
Leyton (England) Urban District Council Public Library		1
Lynn Public Library		1
McCall, Samuel W., Washington, D. C.	8	
McGlenen, Edward W., Boston		1
Mackenzie College, S. Paulo, Brazil		1
McNamee, John H. H.	10	
Malden Public Library		1
Manchester (N. H.) City Library		1
Massachusetts, Commonwealth of	27	1
Massachusetts Civil Service Commission		1
Massachusetts College of Pharmacy, Boston		1
Massachusetts Institute of Technology, Boston		1
Matthews, George E. & Co., Buffalo, N. Y.	2	
Medford Public Library	2	2
Milwaukee (Wis.) Public Library		1
Minneapolis (Minn.) Public Library		2
Möring, *Mrs.* Anna L., per Mrs. Francis Bowen, 3 Portraits, 1 Drawing, 1 Miniature		
Munroe, C. E., Washington, D. C.		1
Museum of Comparative Zoölogy	2	
Nash, *Miss* M. A.	1	
National Civil Service Reform League, New York, N. Y.		2
New Bedford Free Public Library		1
New Haven (Conn.) Free Public Library		1
New York Public Library	1	
New York State Charities Aid Association		2
New York State Library School, Albany, N. Y.	5	9
Newark (N. J.) Free Public Library		1
Newberry Library, Chicago, Ill.		2
Newton Free Library		2
Northampton Public Library		1
Oberlin (Ohio) College Library		1
Olmstead, D. H.	1	
Palmer, *Mrs.* Charles F.	1	
Paterson (N. J.) Free Public Library		1
Peabody Education Fund	1	
Peoria (Ill.) Public Library		1
Phillips Exeter Academy, Exeter, N. H.		1
Piper, William Taggard		2
Portland (Maine) Public Library		1
Pratt Institute, Brooklyn, N. Y.		2
Princeton University, Princeton, N. J.		2
Providence Athenæum, Providence, R. I.		1
Providence (R. I.) Public Library		1
Public Reservations, Trustees of, Boston		1
Redwood Library and Athenæum, Newport, R. I.		1
Reform Club, Sound Currency Committee, New York, N. Y.	1	
Reynolds Library, Rochester, N. Y.		1
Rindge, Frederick H., Los Angeles, Cal.	1	
Robbins Library, Arlington		1

	V.	P.
St. Giles Public Library, London, England		1
St. Louis (Mo.) Mercantile Library Association		2
St. Louis (Mo.) Public Free Library		1
St. Martin-in-the-Fields and St. Paul, Covent Garden, Library, London, England		1
Salem Public Library		2
San Francisco (Cal.) Free Public Library		1
Schurman, J. G., Ithaca, N. Y.	1	
Scots Charitable Society, Boston	1	
Scott, Alva R., Worcester		1
Scranton (Pa.) Public Library		1
Smithsonian Institution, Washington, D. C.	4	
Somerville Public Library	1	1
Southbridge Public Library		1
Springfield City Library		1
Stillman, J. W.	1	
Stratton, G. W.	10	
Sturtevant Co., B. F., Boston	1	
Syracuse (N. Y.) Central Library		1
Taunton Public Library		1
Torrey, Henry W., Library of	20	
Tufts Library, Weymouth		2
Tulane University, New Orleans, La.		2
United States: —		
Agriculture, Department of	4	
Bureau of Education	2	
Civil Service Commission	3	
Geological Survey	18	
Interior, Department of	9	
Interstate Commerce Commission	1	
Labor, Department of	1	
Patent Office	2	
Treasury Department	2	
University of Chicago, Chicago, Ill.		1
University of Pennsylvania, Philadelphia, Pa.		1
University of Wisconsin, Madison, Wis.	1	
Venezuela Legation, Washington, D. C.	2	
Watertown Public Library		1
Whitney, *Miss* M.	2	
Whitney, W. H.	2	
Wilmington (Del.) Institute		1
Winthrop Public Library		1
Wisconsin State Historical Society, Madison, Wis.	1	
Woburn Public Library		1
Woodbury, John P., Boston	1	
Woodman, Mary	4	
Worcester Academy, Worcester		1
Wyman, Morrill		1
Yale University, New Haven, Conn.	1	1

Bulletins, or similar publications, have been regularly received from the following libraries: —

Boston Public Library
Brookline Public Library
Brooklyn Library
Carnegie Library of Pittsburgh
Hartford Public Library
Helena (Montana) Public Library
Iowa Masonic Library, Cedar Rapids, Iowa
Lawrence Free Public Library

Library Association of Portland, O.
Lowell City Library
Minneapolis Public Library
New Bedford Free Public Library
New Haven Free Public Library
New York Public Library
Paterson Free Public Library
Pratt Institute
Providence Athenæum
Providence Public Library
Salem Public Library
San Francisco Free Public Library
Scranton Public Library
Somerville Public Library
Springfield City Library
Taunton Public Library
Worcester Free Public Library.

REPORT OF THE COMMISSIONERS FOR THE BOSTON AND CAMBRIDGE BRIDGES

To the Honorable the Mayor and City Council of the City of Cambridge: —

Sirs: — The Commissioners for the Boston and Cambridge Bridges having the charge of the Harvard, West Boston, Craigie, Prison Point, Brookline Street, River Street, Western Avenue and North Harvard Street Bridges, submit their annual report of the matters pertaining to said bridges. The Brookline Street, River Street, Western Avenue and North Harvard Street Bridges have been under the charge of this Board only since July 1, 1898, being so placed at that time under the provisions of section 14, of chapter 467, of the Acts of the year 1898.

Harvard Bridge.

In November, 1897, the roadway for the entire length of the bridge was newly sheathed. Heretofore this sheathing was renewed every year, either in October or November. This year, by looking after it carefully and patching when necessary, we expect to carry it through until spring. By putting down new sheathing in April, we will have a smooth surface all summer, which will be much better for vehicles and bicycles. We required more room for storage, etc., at house on pier, and added to the present structure twelve feet by fourteen feet, one story, and painted it and the building connected with it. The greater part of the work was done by the draw-tenders on the bridge. The ironwork underneath the surface of the bridge, where the salt water comes in contact with it, rusts very badly. We had the worst places scraped and painted. The work was done by the men on the bridge. Next year all the iron work the whole length and width of the bridge will have to be painted.

Other parts of the bridge are in fairly good condition. In April the Welsbach light on Boston end of bridge was put on. The contract expires in April, 1899.

The bicycle path put down last November, three feet wide on each side of the bridge near the curb, seems to give good satisfaction to riders on these vehicles. Ordinary repairs on the bridge, keeping the electric light globes clean and in order, the sidewalks free from snow in winter and cleaning the bridge, is done by the draw-tender and his assistants.

West Boston Bridge.

The Boston end of this bridge has settled. To keep it in place three trusses were put under the roadway.

The under plank on the roadway of the draw were replaced by new three-inch plank, and new sheathing laid over them. The bridge is in a very poor

condition and is going to be replaced by a new one. No more work is done than is necessary to make the bridge safe for travel. The bridge was watered three times daily from April 1st to November 1st.

The ordinary repairs, repairing paving and cleaning bridge, have been attended to.

The draw-tender and assistants have swept and cleaned the snow from sidewalks and piers, when necessary, and have made the repairs.

A temporary bridge is being built on the south side of this bridge to take its place while building the new one. This new bridge, when completed, will be named the Cambridge Bridge.

Craigie Bridge.

On the south side of the Boston end of this bridge the sidewalk had settled and hard pine 8 by 12 inches was placed the whole length to keep it in place.

A new bulkhead and fence have been built on the north side of the Cambridge end of this bridge, four hundred feet in length, commencing at the draw. A brick sidewalk has been laid, curb-stone reset, and road-way paved from the curb to the track. The paving on other parts of the bridge has been repaired, and the brick sidewalk on the old part has been relaid. The fence on the north side of the bridge and part of that on the south side has been given two coats of paint.

The road-way has been swept and cleaned; the bridge watered three times every day when necessary, from April to November.

The draw has been sheathed.

Ordinary repairs and sweeping and cleaning snow from the sidwalks are done by the draw-tender and assistants.

Before deciding the grade to be established on Bridge Street near the entrance to Austin Street where the City of Cambridge and Boston and Maine Railroad Company are to build an overhead street, it would be well to consider what the rise of grade will be and the width and the side to be widened when a new bridge will be built to take the place of the present Craigie Bridge. A part of this bridge on the Boston end and also on the Cambridge end, is in very poor condition. Some of the piles in the Cambridge end have been in position about 100 years. Trusses have been put under it, holes cut in the bridge, and piles driven through to strengthen it.

The draw is worn out. It is also too narrow. Teams and cars cannot pass over together.

The traffic on this bridge is immense and increasing every year. One-half the travel comes from places outside of Cambridge.

By the time the new Cambridge Bridge is built to take the place of West Boston Bridge, another bridge, as wide and as good, will have to be built to take the place of Craigie Bridge.

Prison Point Bridge.

This bridge is kept in as good repair as is possible. It being old, we do not care to expend a large amount on it. We expect the Boston and Maine Railroad Company will soon build an overhead street. When they do, a new draw will then take the place of the old one.

The draw-tender keeps the bridge clean and does ordinary repairs.

Brookline Street Bridge.

This bridge is in very good condition, having been rebuilt two years ago.

The draw-tenders do all ordinary repairs, such as sweeping the bridge and repairing sheathing on bridge and draw. A small building for tools and storage was placed on the pier; the work was done by the men employed on the bridge.

New chains for hoisting draw were put on.

The bridge was poorly lighted. There were only two arc lights the whole length of the bridge and travel at night was unsafe. Three new arc lights have been added, two Boston side, one Cambridge side.

River Street Bridge.

This bridge is in fair condition. New chains for hoisting the draw were put in place. Repairs were made on bridge, draw, and piers; and the small houses on the piers were repaired.

One arc light has been placed on the Cambridge end of this bridge.

Western Avenue Bridge.

Repairs were made on the road-way, draw and small houses.

The planking in the water-way, piers and guard were repaired.

One arc light has been placed on the Cambridge end of this bridge.

North Harvard Bridge.

Repairs have been made on this bridge, draw, piers, and small houses on piers.

This bridge ought to be replaced with a new, wider and more modern one. Cambridge has widened Boylston Street, Boston is now widening and raising the grade of North Harvard Street.

The park on the borders of Charles River on Cambridge side is very fine.

Extensive improvements now being made on the Boston side of the Charles River for a park and speedway, when all are completed will make this part of the river quite ornamental. A bridge at this place should be in keeping with the surroundings.

The amount of revenue received for rents, dockage, repairs to the West End Street Railway Company's tracks, etc., during the year, has been $1,492.40, one-half of which, $746.20, has been paid to each city.

Respectfully submitted,

WILLIAM J. MARVIN,

Commissioner for Boston and Cambridge Bridges, and Harbor Master for Cambridge.

Number of Times the Draws in Canal, Harvard, Prison Point and West Boston Bridges have been opened, and the Number of Vessels which have passed through for the year beginning Dec. 1, 1897, and ending Nov. 30, 1898.

Date.	Canal.		Harvard.		Prison Point.		West Boston.	
Dec. 1, 1897, to Nov. 30, 1898.	Number of Draw Openings.	Number of Vessels passed Through.	Number of Draw Openings.	Number of Vessels passed Through.	Number of Draw Openings.	Number of Vessels passed Through.	Number of Draw Openings.	Number of Vessels passed Through.
1897.								
December..	302	464	170	198	43	70	151	234
1898.								
January....	126	199	17	20	28	44	30	37
February...	71	99	8	8	16	23	13	15
March.....	344	355	106	130	15	21	134	224
April.....	283	419	260	286	14	18	129	224
May.....	321	488	239	275	37	54	177	312
June.....	270	390	200	238	36	57	116	218
July.....	358	404	114	150	36	50	137	235
August.....	328	494	164	18	32	47	188	310
September..	318	506	137	150	45	69	133	229
October.....	406	258	123	133	26	40	130	220
November..	262	462	178	207	50	79	158	285
Totals....	3,389	4,538	1,716	1,983	378	572	1,496	2,543

Number of Times the Draws in River Street, Brookline Street, Boylston Street and Western Avenue Bridge to Cambridge have been opened, and the Number of Vessels which passed through, beginning July 1, and ending Nov. 30, 1898.

Date.	River St.		Brookline St.		Boylston St.		Western Ave.	
July 1, to Nov. 30, 1898.	Number of Draw Openings.	Number of Vessels passed Through.	Number of Draw Openings.	Number of Vessels passed Through.	Number of Draw Openings.	Number of Vessels passed Through.	Number of Draw Openings.	Number of Vessels passed Through.
1898.								
July.....	107	287	88	145	85	266	98	255
August.....	181	557	104	173	115	342	179	550
September..	119	338	80	136	67	126	108	310
October.....	86	304	60	102	36	57	79	307
November..	89	169	96	169	63	133	77	153
Totals....	582	1,655	428	725	366	924	541	1,575

CITY CLERK'S REPORT OF FEES AND LICENSES

OFFICE OF THE CITY CLERK, December 19, 1898.

To the Honorable the City Council of the City of Cambridge: —

The undersigned herewith presents an account of the sums received for fees and licenses during the year ending November 30, 1898.

Auctioneers' Licenses	$56 00
Pool, Bowling Alley and Billiard Licenses	78 00
Wagon and Carriage Licenses	317 00
Intelligence Office Licenses	20 00
Junk Store and Collectors' Licenses	339 00
Pawnbrokers' Licenses	50 00
Recording Mortgages, Assignments, etc.	621 50
Marriage Certificates	480 50
Certified Copies from Records	107 30
Fees from Dog Licenses	384 80
Fees from Liquor Licenses	48 00
Fees from Firework Licenses	109 00
Sundries	13 75
Total	$2,624 85

The foregoing amount has been paid into the City Treasury.

The receipts from Dog Licenses have been $4,629.00. Of this amount the City Clerk's fee (20 cents for each license issued), amounting to the sum of $384.80, is included in the above list of fees, and the balance, amounting to $4,244.20, has been paid the County Treasurer.

Respectfully submitted,

EDWARD J. BRANDON,
City Clerk.

REPORT OF THE CITY MESSENGER

OFFICE OF THE CITY MESSENGER, December 1, 1898.

To the Honorable the City Council: —

GENTLEMEN: — In compliance with the Ordinance relating to the purchase and delivery of stationery, the City Messenger has the honor to submit his annual report: —

Stock of stationery on hand December 1, 1897	$314 16
Purchased during the year	1,082 36
	$1.396 52

Delivered to heads of departments as follows: —

Street Department	$ 59 16
City Clerk Department	122 94
Engineering Department	39 .8
Clerk of Committees Department	115 40
Auditing Department	52 99
City Messenger Department	102 80
City Treasurer Department	36 98
Police Department	61 29
Lamp Department	5 29
Assessors' Department	85 31
Fire Department	4 54
Inspector of Milk Department	18 82
Superintendent Public Buildings Department	26 00
State Aid Agent Department	13 12
Inspector of Wires Department	16 11
Law Department	31 77
Executive Department	59 14
Election expenses	40 01
Sealer of Weights and Measures	5 75
Registrars of Voters	4 77
Park Department	70 76
Sewer Department	4 85
Board of Health	10 00
Cambridge Public Library	59 05
Contingent Fund	13 14
Stock of stationery on hand December 1, 1898	336 75
	$1,396 52

Respectfully submitted,

FRANCIS L. PRATT,
City Messenger.

REPORT OF INSPECTOR OF ANIMALS AND PROVISIONS

To the Honorable the City Council: —

GENTLEMEN: — In compliance with the City Ordinance, I have the honor to present my annual report of Inspector of Animals and Provisions of the City of Cambridge, ending Nov. 30, 1898.

Appropriation		$800 00
Salary	$700 00	
Medicines, etc.	98 12	
Balance on hand	1 88	
		$800 00

The animals kept for the production of milk have not been inspected this year, on account of the State Board of Cattle Commissioners not having received any appropriation from the State to carry on their work. The work of quarantining and destroying horses affected with glanders and farcy, however, has been carried on.

Total number of horses examined	32
Quarantined	28
Killed	26

We have had an unusually large number of cases of glanders in the City this year. As a prophylactic measure, would recommend that the several watering-places in the City be cleaned out at least once a week. If the disease has a tendency to increase, certain watering-places should be shut off, for at least thirty days. The results would be better if this could be done in co-operation with the City of Somerville. The disease seems to be evenly distributed throughout the City.

Innoculations are made of suspicious cases, on other animals, therefore the mistakes liable to be made in diagnosis are very rare. The above also applies to rabies in dogs.

The horses owned by the City have been in a good physical condition. I have made 398 visits to the horses of the various departments, and had one horse affected with glanders killed. Have also examined twelve horses as to soundness, before they were purchased by the City.

Thanking His Honor the Mayor, and members of the City Council,

I am, very respectfully yours,

CHARLES E. HADCOCK, M. D. V.

Inspector of Animals and Provisions.

REPORT OF THE COMMITTEE ON SOLDIERS' AID

The Committee on Soldiers' Aid submits to the City Council its report for the year ending November 30, 1898:—

The amount paid as regular State Aid was	$13,550 00
The amount paid to indigent soldiers and sailors was	1,350 00
The amount paid as soldiers' relief was	6,855 00
The amount paid for the burial of deceased indigent or friendless soldiers or sailors was	735 00
The amount paid to the clerk and agent employed in the examination of settlements, etc., was	900 00
Printing and stationery	103 12
Aid by cities and towns	314 29
Board and care of sundry persons	1,252 92
Car tickets and carriage hire	18 00
Fuel	92 60
Sundry supplies	104 94
Typewriting	13 00
Total	$25,288 87

The amount received from the Commonwealth was	$14,143 18
The amount received from other towns and cities was	305 41
For sundry authorized payments which were not paid	187 50
	$14,636 09

There are now upon the State Aid list 281 persons, and upon the list of indigent soldiers and sailors 11. The number of persons upon the soldiers' relief list is 99.

All of which is respectfully submitted.

JAMES A. WOOD,
EBEN H. GOOGINS,
CLEMENT G. MORGAN,
JOHN J. AHERN,
WALTER C. WARDWELL,
Committee on Soldiers' Aid.

REPORT OF THE SEALER OF WEIGHTS AND MEASURES

OFFICE OF THE SEALER OF WEIGHTS AND MEASURES,
CAMBRIDGE, December 1, 1898.

To the Honorable the City Council: —

I have the honor of submitting the report of the Department of Weights and Measures for the year ending November 30, 1898.

Amount of appropriation		$1,600 00
Amount of revenue received	$502 09	

EXPENDED.

For salaries: —		
Sealer, Albert F. Roberts	$1,000 00	
Assistant, Edward S. Dowling	237 50	
Board of horse and care of wagons and harnesses	275 00	
Horse-shoeing	16 00	
Repairs on wagons	9 10	
One light express harness	20 00	
Stamp and burning brands	7 90	
Half-dozen hands for spring scales	1 02	
Cambridge Directory	3 00	
Publishing annual notices	1 62	
Boston Elevated Railway (car tickets)	10 00	
One hand drill	2 25	
Plank for public scales	2 59	
Polishing and nickle plating standard weights	5 63	
Rubber stamp and pad	2 75	
500 official tags and printing same	3 00	
25 pounds lead wire	1 10	
Amount expended	$1,598 46	
Amount of appropriation		$1,600 00
Amount expended		1,598 46
Unexpended balance		$1 54

Whole number of scales, weights and measures inspected	36,589
Whole number of scales, weights and measures condemned	1,868
Whole number sealed	34,721
Whole number found incorrect and adjusted	540
Whole number of milk cans and bottles condemned	1,670
Whole number of scales, weights and measures condemned	198
Total condemned	1,868

Much can be said in reference to the work of this department.

The question is often asked of the Sealer, what do you do? In answering this question I am obliged to tell a long story. When I tell them how I

have to visit once a year every store, shop, manufacturing establishment, coal wharf, etc., where scales, weights and measures are used for buying or selling goods, and examine them, how I am expected to keep a sharp lookout for all awkers and pedlers, all charcoal dealers, all junk collectors, and every milkman,—in fact everybody who does business by the use of scales, weights and measures within our City limits, they invariably admit that they had not the slightest idea of the amount of work there was to be done in order that everybody may be protected in the use of scales, weights and measures, and of the responsibility the head of this department is obliged to assume. There are several important things which come under the immediate inspection of the Sealer of Weights and Measures, in which there ought to be made some radical changes, for the better protection against fraud and deception by the use of illegal scales, weights and measures, especially by a certain class of men who go from house to house in the prosecution of their business.

Hawkers and pedlers who have no residence in our City, hire a team (loaded with apples and potatoes) for a day at a time, and come to our City (where a license is not required) and impose upon our housewives by using measures purporting to be up to the standard, when in reality, they are from twenty-five to thirty per cent under measure, and in many cases they will have a legal measure partially exposed to view, with another cut down so as to fit inside, thus showing outside, full measure, but inside from two to three quarts short measure.

It does seem as though our City Government might create an ordinance that would protect our citizens against this disreputable class of men.

There is another class of men who come from our neighboring cities and take up a residence the first of the year (or thereabouts) and remain here just long enough to obtain a license for a certain line of business, and if successful n obtaining the license, will in many cases immediately move away. They pay no taxes, can neither read nor write, and can hardly speak the English language. They will procure the worst scales that can be found with which to do business, and I consider that they are a detriment to any business in which they may be engaged, and especially that for which they seek a license. To our own citizens who are obliged to compete with these classes of men just mentioned, who are trying to earn an honest living, and who pay taxes to the support of this City Government, is due the protection which they ask and for which they are willing to pay.

This year I have caused the arrest of many hawkers and pedlers and have prosecuted them through the courts for the use of illegal measures on our streets.

I would again strongly recommend that an ordinance be passed obliging every hawker and pedler to procure a license for which he shall pay a suitable sum before he shall be allowed to do business upon our streets.

I would also recommend that in granting licenses to junk collectors great care be exercised as to whom licenses shall be granted.

I desire to thank the heads of the different departments and all connected with them for the uniform courtesy and kindness received at their hands.

Respectfully submitted,

A. F. ROBERTS,

Sealer of Weights and Measures.

REPORT OF THE TRUSTEES OF THE DOWSE INSTITUTE

CAMBRIDGE, December 15, 1898.

To the Honorable the City Council: —

The Board of Trustees of the Dowse Institute respectfully reports that a course of seven lectures with one concert was given in Union Hall, Cambridgeport, beginning Nov. 17, 1897, and ending January 4, 1898.

An attested copy of the accounts of the Treasurer is herewith transmitted, showing the amount of receipts and expenditures.

FRANK A. ALLEN,
W. A. BULLARD,
GEO. HOWLAND COX,
} *Board of Trustees.*

W. A. BULLARD, TREASURER, IN ACCOUNT WITH DOWSE INSTITUTE.

Dr.

1897			
Nov.	To balance		$ 81
Dec.	City of Cambridge, one year's interest	$600 00	
	Sale of tickets to course,	384 75	
			$984 75
			$985 56

Cr.

Nov.–Dec., 1897.			
By cash			
Geo. H. Darwin, lecture		$100 00	
Robarts Harper, 3 lectures		150 00	
Adamoski Quartette and Cora G. Barton, concert		130 00	
Prof. John Fiske, lecture		50 00	
Prof. J. W. Churchill, reading,		100 00	
Prof. Wm. Everett, lecture		50 00	
			$580 00
Cambridge Chronicle, adv.		41 25	
" Tribune "		10 50	
" News, 2 yrs. "		20 00	
" Press "		10 50	
Stamped envelopes addressed, mailed		22 70	
J. H. Ford, printing		19 25	
E. W. Blake "		5 00	
Cambridge Blue Book		1 00	
A. F. Buffum, doorkeeper, etc.		21 50	
F. M. Buffum "		8 00	
C. L. Russell " 2 yrs.		16 00	
H. H. Dyer, ticket seller		8 00	
F. L Beunke, distributing circulars		1 95	
Geo. E. French, distributing circulars		1 50	
Union Hall Assn., rent of hall,		218 41	
			$405 56
			$985 56

ATTEST:

(Signed) W. A. BULLARD, *Treasurer.*

REPORT OF THE TRUSTEES OF THE BRIDGE CHARITABLE FUND

To the Honorable the City Council:—

This Board respectfully submits its twenty-second annual report:

The amount on deposit in the Combridgeport Savings Bank to the credit of this fund, as to July 18, 1897, was	$3,507 61
Interest (added semi-annually) to July 18, 1898	141 64
	$3,648 25

The duty of caring for this fund is nominal only as the money remains in the custody of the Savings Bank, and cannot be withdrawn except by order of the Mayor.

As was stated in the last annual report, by the terms of the deed of gift of founder of the fund, Levi Bridge, two-thirds of the interest accumulations of the fund, beyond the sum of $2,000.00, are due and payable to the Board of Overseers of the Poor. In April, 1885, the amount then due that Board, namely, $275.17, was withdrawn by Mayor William E. Russell, and a separate deposit account opened with the Overseers of the Poor. The latter sum, placed to the credit of that Board, has since increased by interest accumulation to $464.68. The amount now due from the fund to the Overseers of the Poor, under the terms of the bequest, is about $1,100.00. It seems advisable that this indebtedness should be paid and the money withdrawn from the fund and placed to the credit of the Overseers of the Poor.

In concluding this report the Board fervently hopes that the cherished wishes of the donor of this fund, as expressed in his deed of gift, may come to be abundantly realized; that the fund may grow year by year not only by the slow accumulations of interest, but by donations from other liberal and philanthropic persons, and that it may in the not distant future be ministrant of welcome relief to the unfortunate though deserving poor of our City.

ALVIN F. SORTWELL,
RUSSELL BRADFORD,
GEORGE E. SAUNDERS,
Trustees of the Bridge Charitable Fund.

REPORT OF THE TRUSTEES OF THE SANDERS TEMPERANCE FUND

To the Honorable the City Council:—

The Trustees of the Sanders Temperance Fund present herewith the thirty-third annual report relative to the fund and its management since its establishment by the donor.

As has been stated many times in former reports, this fund consists of the sum of $10,000.00, which was bequeathed to the City by Charles Sanders, a former resident of Cambridge. He was deeply interested in the temperance cause, and he was desirous that practical efforts should be done to promote temperance work. By the terms of the will, the interest of this sum is to be spent in the support of an energetic Missionary who should be constantly employed in the cause of temperance, in reforming old drunkards and preventing young drunkards, and abolishing as far as possible the use of intoxicating articles. A similar bequest was made to the town of Gloucester.

Mr. James Hicks, who was appointed in the year 1896, as Missionary under the terms of the bequest, has been continued in service by the Board of Trustees. He is deeply interested in his work, and has labored faithfully in its behalf; in his report which follows this, he recites his own story of his labors, giving assurance of the faithful manner in which he has fulfilled the wishes of the donor of the fund.

ALVIN F. SORTWELL,
RUSSELL BRADFORD,
GEO. E. SAUNDERS,
Trustees of Sanders Temperance Fund.

CAMBRIDGEPORT, December, 1898.

To the Trustees of the Sanders Temperance Fund:—

GENTLEMEN:— In accordance with your requirements, I hereby submit to you my annual report. I have used every means in my power to carry out the wishes of the founder, whose earnest desire is "to reform old drunkards, to prevent young drunkards, and to abolish as far as possible the use of all intoxicating drinks." I have followed up the old-established custom of attending the Sessions of the District Court, where I come in daily contact with the unfortunate drinking class, young and old. My heart goes out in sympathy, and where I can say a kind word, or help in any way the unfortunate, I never miss an opportunity. Through the kindness of the Court I am enabled in special cases to follow up men closely, who for many years have followed the

drink habit. In this I am rewarded in many instances, by seeing them cut loose from the company, and become sober, industrious citizens.

I meet another class, which come before the Court for non-support, — homes once happy, broken up; wives and children neglected; in almost every case traceable to the drink habit. I speak with these people before leaving the Court, follow them to the blighted home. Many of them have children. I reason with them and advise, and I am very often pleased to see families of this class, once more united, and the home become as it should be, the place of rest and comfort, after the daily toil is over.

Temperance Meetings.

I have assisted in conducting one hundred and fifty (150) public temperance meetings in the City, where the pledge of total abstinence is always offered to the drinking man, and where he can come and always receive a hearty welcome. Three public meetings of this class are held every week, and a strong force of reformed men and temperance workers always present to testify to what temperance has done for themselves and their homes. About seven hundred persons have taken the pledge at these meetings during the year, a very large proportion of them drinking men.

I keep a very close lookout for those who sign, and I am happy to say, very few, comparatively speaking, go back to their cups. They are still followed up and induced to sign over again. *Thank God* for our *No-vote* for the thirteenth time in our beloved City, which keeps the temptation from before our fallen and weak brothers, who do not want to drink, but who would be hardly able to resist were the open saloon placed on our streets. It has also been my privilege to speak at evening temperance meetings in several of our churches, whose membership is deeply interested in the work of reforming the drunkard.

House of Correction.

A good deal of my time and attention has been given to this institution. I have attended the services in the chapel every Sunday morning during the year, and have done what I could to interest the inmates, both male and female. I have made many visits to individual prisoners, have done what I could to encourage and give hope for the future. I know of a good number, who have served time for drunkenness, who have come out with a purpose to live a sober and industrious life, and have carried their resolve into practice, and to-day are amongst our most earnest temperance workers in the City, respected and respectable, with homes happy, and well provided for.

I have attended to the collecting of literature for the prisoners and have collected from the publishing houses in Boston and other places thousands of pages, which I see distributed to the men every Sunday morning as they go from the chapel.

Visits Made.

I have made two thousand one hundred and ten (2,110) visits to the homes of the unfortunate poor, made so because of the intemperate habits of the father. Mother and children look to me in every case for help. Sometimes the father will be in our House of Correction or some other institution serving

time for drunkenness, wife and children left unprotected without food or clothing. I can only direct such to our City for help, or to the charitable institutions, or call the attention of the charitably disposed to the worthy cases of this kind which I meet. I am happy to say, many of my visits have resulted in the taking of the pledge, and in a very short time the whole appearance of home and family changed. The men wake up, and begin to work not only for themselves, but for their companions whom they left behind, and in so doing have greatly helped themselves. I have been very much encouraged in my work during the year, and feel that God has wonderfully blessed my feeble efforts. My visits to the home, especially give me much hope for future good results. I have had several cases of husbands and wives who have been parted, come together with their children and the home made once more happy.

In conclusion, I desire to express my thanks for the hearty co-operation of the temperance people of the City, the Woman's Christian Temperance Union, the different Reform Clubs, the Temple of Honor, and other temperance organizations, with all of whom I have worked in the greatest of harmony and good-will, and the Lord's blessing has come down upon our united labors in our endeavors to help our fellow-men.

Respectfully submitted,

JAMES HICKS,

Missionary, Sanders Temperance Fund.

REPORT OF THE SUPERINTENDENT OF STREETS

To the Honorable the City Council:—

GENTLEMEN: — In accordance with the requirements of the ordinance relating to streets, I have the honor to submit my fifth annual report, for the financial year ending November 30, 1898.

The accounts of the various appropriations of this department are here given in alphabetical order, as they appear on the City Auditor's monthly statement.

Bridges.

Appropriation			$4,700 00
EXPENDED.			
Draw-tenders' salaries		$2,402 29	
Boylston Street Bridge, repairs		3 67	
Brookline Street Bridge, re-building pier		329 54	
River Street Bridge, new draw chains		41 40	
Western Avenue Bridge, new draw chains		48 18	
First Street Bridge:—			
Painting	$15 56		
Planking	164 28		
Repairs	42 38		
		222 22	
Third Street Bridge:—			
Planking	$54 44		
Repairs	9 71		
		64 15	
Sixth Street Bridge:—			
Planking	$100 13		
Repairs	86 84		
		186 97	
Walden Street Bridge:—			
Painting and lead sheathing	$434 00		
Repairs	11 87		
		445 87	
Huron Avenue Bridge (over railroad):—			
Painting and lead sheathing	$525 76		
Planking	156 81		
		682 57	
Huron Avenue Bridge (over pipeway), planking		144 42	
Wellington Street Bridge, planking		62 17	
General Supplies and Sundries		39 53	
			4,672 98
Balance			$27 02

Under the provisions of section 14 of chapter 467 of the Legislative Acts of 1898, the Brookline Street, River Street, Western Avenue and Boylston Street Bridges were placed under the control of the Bridge Commissioners of Boston and Cambridge, and on July 1, of this year, the unexpended

balance of the amount appropriated for the care and maintenance of these bridges, viz., $1,600.00, was transferred to that account. The amounts expended on these above-named bridges are for their maintenance, care and repairs for the seven months ending June 30, 1898. There remain in the care of this department the three bridges over Broad Canal, at First, Third and Sixth Streets, two over the Fitchburg Railroad, at Walden Street and Huron Avenue, one over the Water Works Pipe Way at Huron Avenue, one over Alewife Brook, at Massachusetts Avenue, and one over Wellington Brook, at Wellington Street.

All these bridges are now in good condition and will require only the ordinary repairs during next year. The iron work on the under part of the bridges over the railroad has been carefully scraped and cleaned, repainted, and sheathed with sheet lead to protect it from the smoke and gases of the engines passing beneath.

Cleaning Streets.

Appropriation		$26,500 00
EXPENDED.		
Labor	$23,998 47	
Teaming	2,142 19	
Repairs to sweeping machines, etc.	71 18	
Re-filling sweeping machine brushes	152 85	
Shovels, hand brooms, etc.	135 13	
		26,499 82
Balance		$ 18

The above amount was expended, as shown, in cleaning streets and taking care of snow and ice. The cost of the latter was:—

District No. 1 (Wards 2, 3 and 4)	$3,187 50
District No. 2 (Wards 1 and 5)	2,563 00
Total	$5,750 50

A large part of this expense was occasioned by the blizzard of February 1, the cost to this department for that storm alone being about $3,200.00. The storm of the 27th of November came upon us when the accounts for the financial year were practically closed, the appropriation for this purpose having been entirely expended, and the expense of that storm, about $2,700.00, will be included in the estimates for the ensuing year.

The three general cleanings of all the streets have been made as usual, the paved streets have been swept once every three weeks and crossings have been cleaned whenever necessary.

The increased amount of cleaning done this year is shown by a comparison of the number of loads of sweepings collected and disposed of during the past three years:—

	Loads collected.	Loads sold.	Carted to dump.
1896	15,339	3,790	11,549
1897	15,586	2,178	13,408
1898	20,209	1,109	19,100

The "section system" so called, of cleaning every day certain important sections of the city and having a man in each section responsible for its condition at all times, which was inaugurated in 1894 with six men, now consists of fifteen sections and includes most of the important thoroughfares and public squares in the city. I should be glad to be able to extend this system to a number of important streets not yet covered by it, but in order to do so, a considerable increase must be made in the appropriation for this work.

We have about five miles of paved streets, all in the busiest sections of the city and provision should be made for sweeping them at least once, and if possible twice, every week.

Collection of Ashes.

Appropriation		$21,200 00
EXPENDED.		
Labor	$18,211 48	
Hay, grain and straw	2,030 63	
Horses (five)	815 00	
Harnesses, dressing, repairs, etc.	141 44	
		21,198 55
Balance		$1 45

This amount has been expended, as shown above, in the daily collection of ashes, and the collection of yard rakings, tree trimmings, brush, etc., in the spring and fall of the year.

The expense for this work increases each year and the proportion of increase has been greater this year than usual, as will be seen by the following comparative statement for the past four years:—

	Loads collected.	Loads sold.	Carted to dumps, etc.	Total cost.	Labor cost.
1895	35,718	5,355	30,363	$18,749 86	$16,066 29
1896	35,938	10,675	25,263	19,348 26	16,385 75
1897	38,238	7,162	31,112	19,763 37	16,569 50
1898	39,045	1,685	37,360	21,198 55	18,211 48

It will be noticed that the increased cost during the past year is wholly accounted for in the item for labor, and is not, I may be permitted to say, on account of any lack of careful supervision of this branch of the department, but of circumstances over which we have no control. The Saturday half-holiday granted through June, July and August, and the scarcity of dumping places throughout the city, which compels us to cart the loads for long distances, increases the number of men and teams required to do the work. Everything collected in Wards One and Five must be carted to the dump in the rear of the Raymond Street stable and all the remainder must be carted to either the dump on Albany Street or to the one on Main Street near Sixth Street. There is no longer any market for the sale of ashes, etc., and unless some other method of disposal is adopted, a larger annual appropriation must hereafter be made for this work.

Under the present ordinance we are required to remove yard trimmings, etc., placed on the streets during the months of April, May, and November, and as we are unable to complete the fall work in one month, I would recommend that the ordinance be amended by adding the month of October to those above named.

Construction of Streets in Vicinity of Cambridge Field.

Appropriation			$6,400 00
EXPENDED.			
Labor		$2,115 14	
Teaming		453 37	
Freight on gravel		48 00	
Gravel		1,413 09	
Lumber, cement, etc.		29 84	
Mason work		77 50	
Stone:—			
Chips	$52 75		
Curb	954 81		
Gutter	1,195 32		
		2,202 88	
			6,339 82
Balance			$60 18

The appropriation for this work as originally passed in the annual budget was $9,900.00, and contemplated the macadamizing of the three streets surrounding Cambridge Field, viz.: Berkshire Street, from Cambridge Street to York Street; Willow Street, from Cambridge Street to York Street; and York Street, from Berkshire Street to Willow Street.

Upon looking into the matter, it was decided, in view of the fact that the travel through these streets would probably be very light, and as the surface of the streets was likely to be more or less disturbed in the development of the abutting lands, that a well built gravel road would be sufficient for a long time. Accordingly, a favorable contract was made with Mr William B. Mullen for a sufficient amount of coarse binding gravel, and the streets have been built of that material.

Curbstones have been set on both sides of all the streets, granite block gutters have been laid and a sufficient number of catch basins built to properly drain the surface water, and I believe that these streets can be kept in good condition for a number of years at very little cost.

Of the $3,500.00 thus saved, $2,500.00 was transferred to the appropriation for Cleaning Streets and $1,000.00 to the appropriation for Collection of Ashes.

Maintenance.

Appropriation		$70,300 00
EXPENDED.		
Salary of Superintendent	$2,000 00	
Clerical assistance	1,516 75	
Labor	37,275 32	
Teaming	131 00	
Field stone and broken stone	12,172 16	
Gravel, freight and loading	776 97	
Hay, grain and straw	5,368 17	
Steam rollers, repairs and supplies	511 74	
Stone crushers, repairs and supplies	1,298 95	
Fuel and light	1,614 42	
Hardware, tools, etc.	1,156 45	
Horses: clipping, shoeing, etc.	1,299 00	
Harnesses, new and repairs, horse clothing, carriage and wagon repairs, etc.	1,152 94	
Stable repairs (lumber, cement and mason-work) and supplies	2,406 07	
Telephones, office supplies, Committee expenses, etc.	882 02	
Paints, Oils, etc.	318 96	
General supplies and sundries	194 67	
Damages to injured employees	223 84	
		70,299 43
Balance		$ 57

The above summary briefly shows the expenditures under this appropriation; for more detailed accounts of the same, see City Auditor's report. This account covers all the running expenses of the department, and while it is commonly understood that the amount appropriated is for the maintenance of the streets, as a matter of fact, a very large part of it is disbursed in the necessary expenses which enter into the cost of maintaining and operating a large department.

The following schedule shows the streets graded in each of the districts, an itemized account of the cost of each street, and the total cost in each district.

District No. 1 (Wards 2, 3 and 4).

Allston Street between Brookline Street and Waverly Street:—		
Labor	$95 00	
Teaming	130 13	
Steam roller	45 50	
Cracked stone	260 00	
Gravel	12 25	
		$542 88
Amount carried forward		$542 88

Amount brought forward		$542 88
Amory Street between Summer Street and Hampshire Street:—		
Labor	$12 00	
Teaming	14 25	
Steam roller	17 50	
Cracked stone	128 75	
		172 50
Auburn Street between Brookline Street and Sidney Street:—		
Labor	$41 00	
Teaming	10 50	
		51 50
Boardman Street between Harvard Street and Broadway:—		
Labor	$55 00	
Teaming	35 63	
Steam roller	21 00	
Cracked stone	157 50	
		269 13
Cambridge Street between Dana Street and Inman Street, north side:—		
Labor	$136 00	
Teaming	106 88	
Steam roller	115 50	
Cracked stone	467 50	
		825 88
Cambridge Street between Dana Street and Inman Street, south side:—		
Labor	$111 00	
Teaming	86 63	
Steam roller	64 75	
Cracked stone	285 00	
		547 38
Dana Street between Harvard Street and Broadway:—		
Labor	$ 91 00	
Teaming	130 50	
Steam roller	26 25	
Cracked stone	262 50	
Gravel	6 00	
		516 25
Harvard Street between Moore Street and Main Street:—		
Labor	$399 50	
Teaming	290 25	
Steam roller	117 25	
Cracked stone	905 00	
		1,712 00
Amount carried forward		$4,637 52

Amount brought forward		$4,637 52
Harvard Street between Dana Street and Hancock Street:—		
Labor	$137 25	
Teaming	119 25	
Steam roller	49 00	
Cracked stone	482 50	
		788 00
Magazine Street between Green Street and Cottage Street:—		
Labor	$111 00	
Teaming	137 25	
Steam roller	57 75	
Cracked stone	330 00	
Gravel	23 10	
		659 10
Massachusetts Avenue between Boston & Albany Railroad and Harvard Bridge:—		
Labor	$94 00	
Teaming	84 38	
Steam roller	63 00	
Cracked stone	250 00	
		491 38
Norfolk Street between Hampshire Street and Broadway:—		
Labor	$109 00	
Teaming	252 75	
Steam roller	59 50	
Cracked stone	447 50	
		868 75
Otis Street between First Street and Second Street:—		
Labor	$ 91 50	
Teaming	295 50	
Gravel	38 00	
		425 00
(252 double loads filling from Massachusetts Avenue.)		
Perry Street between Pearl Street and Magazine Street:—		
Labor	$51 00	
Teaming	94 50	
Steam roller	28 00	
Cracked stone	228 75	
Gravel	19 80	
		422 05
Amount carried forward		$8,291 80

Amount brought forward		$8,291 80
Portland Street between Main Street and Cambridge Street:—		
Labor	$24 00	
Teaming	31 50	
Steam roller	14 00	
Cracked stone	97 50	
		167 00
Portland Street between Cambridge Street and Bristol Street:—		
Labor	$51 00	
Teaming	4 50	
		55 50
River Street between Green Street and Putnam Avenue:—		
Labor	$308 00	
Teaming	252 00	
Steam roller	124 25	
Cracked stone	442 50	
Gravel	4 75	
		1,131 50
Second Street between Cambridge Street and Bent Street:—		
Labor	$314 50	
Teaming	354 00	
Steam roller	87 50	
Cracked stone	1,031 25	
		1,787 25
Seventh Street between Cambridge Street and Gore Street:—		
Labor	$16 00	
Teaming	45 00	
Steam roller	3 50	
Gravel	54 20	
		118 70
Walnut Court:—		
Labor	$23 00	
Teaming	69 00	
Steam roller	7 00	
Gravel	18 75	
		117 75
Warland Street between Pleasant Street and Magazine Street:—		
Labor	$28 00	
Teaming	67 50	
Steam roller	19 25	
Cracked stone	155 00	
		269 75
Amount carried forward		$11,939 25

Amount brought forward			$11,939 25
Warren Street between Cambridge Street and Somerville line:—			
Labor	$93 00		
Teaming	94 50		
Steam roller	31 50		
Cracked stone	255 00		
Gravel	8 75		
		482 75	
Total amount of District No. 1			$12,422 00

District No. 2 (Wards 1 and 5).

Allen Street:—			
Labor	$3 00		
Steam roller	3 50		
		$6 50	
(55 double loads of filling from Massachusetts Avenue.)			
Avon Hill Street between Bates Street and Linnæan Street:—			
Labor	$38 00		
Teaming	56 25		
Steam roller	35 00		
Cracked stone	207 50		
		336 75	
Buena Vista Park:—			
Labor	$52 00		
Teaming	49 50		
Gravel	31 00		
		132 50	
Cogswell Avenue:—			
Labor	$62 00		
Teaming	60 75		
Steam roller	63 00		
Cracked stone	382 50		
Gravel	12 50		
		580 75	
Crescent Avenue between Walden Street and Raymond Street:—			
Labor	$76 50		
Teaming	106 50		
Steam roller	57 75		
Cracked stone	360 00		
Gravel	9 25		
		610 00	
Amounts carried forward		$1,666 50	$12,422 00

Amounts brought forward		$1,666 50	$12,422 00
Dudley Street between Cedar Street and Massachusetts Avenue:—			
Labor	$8 00		
Teaming	10 13		
Steam roller	7 00		
Cracked stone	30 00		
		55 13	
Dunster Street between Mt. Auburn Street and Massachusetts Avenue:—			
Labor	$144 75		
Teaming	218 63		
Steam roller	26 25		
Cracked stone	292 50		
Gravel	5 75		
		687 88	
Foster Street between Lowell Street and Sparks Street:—			
Labor	$82 50		
Teaming	466 50		
Steam roller	7 00		
Gravel	76 25		
		632 25	
Garden Street between Chauncy Street and Huron Avenue:—			
Labor	$259 00		
Teaming	288 75		
Steam roller	161 00		
Cracked stone	1,115 00		
Gravel	2 50		
		1,826 25	
Grant Street between Banks Street and DeWolfe Street:—			
Labor	$28 00		
Teaming	94 50		
Steam roller	38 50		
Cracked stone	252 50		
Gravel	4 50		
		418 00	
Harvard Street between Dana Street and Quincy Street:—			
Labor	$160 00		
Teaming	415 87		
Steam roller	122 50		
Cracked stone	990 00		
		1,688 37	
Amounts carried forward.		$6,974 38	$12,422 00

Amounts brought forward		$6,974 38	$12,422 00
Holyoke Street between South Street and Mill Street:—			
Labor	$13 00		
Teaming	24 75		
Steam roller	5 25		
Cracked stone	43 75		
Gravel	1 75		
		88 50	
Huron Avenue between Massachusetts Avenue and Raymond Street:—			
Labor	$174 00		
Teaming	466 88		
Steam roller	422 25		
Cracked stone	1845 00		
Gravel	13 75		
		2,921 88	
Oliver Street:—			
Labor		18 00	
(81 double loads filling from Massachusetts Ave.)			
Orrin Street:—			
Labor	$56 00		
Teaming	53 25		
		109 25	
(112 double loads filling from Massachusetts Ave.)			
Oxford Street between Kirkland Street and Somerville line:—			
Labor	$313 00		
Teaming	583 13		
Steam roller	229 25		
Cracked stone	1730 00		
Gravel	75		
		2,856 13	
Regent Street:—			
Labor	$4 50		
		4 50	
(56 double loads filling from Massachusetts Avenue.)			
Regent Street between Massachusetts Avenue and Fitchburg Railroad:—			
Labor	$16 00		
Teaming	48 38		
Steam roller	21 00		
Cracked stone	197 50		
Gravel	4 25		
		287 13	
Amounts carried forward		$13,259 77	$12,422 00

Amounts brought forward		$13,259 77	$12,422 00
Rindge Avenue between Hollis Street and Schoolhouse:—			
Labor	$24 00		
Teaming	16 13		
Steam roller	3 50		
Cracked stone	17 50		
		61 13	
Sparks Street between Brattle Street and Mt. Auburn Street:—			
Labor	$ 97 00		
Teaming	133 88		
Steam roller	49 00		
Cracked stone	275 00		
		554 88	
Walden Street between Massachusetts Avenue and the bridge:—			
Labor	$ 6 00		
Teaming	14 63		
Steam roller	8 75		
Cracked stone	52 50		
Gravel	2 50		
		84 38	
Walnut Avenue:—			
Labor	$ 2 00		
Teaming	12 75		
Steam roller	7 00		
Cracked stone	27 50		
		49 25	
Winslow Street:—			
Labor	$52 00		
Teaming	19 50		
		71 50	
(222 double loads filling from Massachusetts Avenue.)			
Total District No. 2			14,080 91
Totals Districts Nos. 1 and 2			$26,502 91

In addition to the amount expended for macadamizing, resurfacing and grading the streets above named, we have expended $13,132.32 in patching and "minute repairs" on nearly all of the streets in the city, the total amount thus expended for labor and materials used directly on the streets being a little less than $40,000.00.

The number of miles of accepted streets at present is 89.7, of which 5.4 miles are paved, leaving about 85 miles of gravel and macadamized streets, the greater part of them subjected to heavy travel, which must be kept in

repair out of the above named amount. This is an average of only $470.00 per mile and is of course not nearly sufficient for the amount of work really necessary to keep our streets even in fair condition. There are a great many streets which should be entirely rebuilt and if, in addition to the usual appropriation for "Maintenance," a special appropriation for construction of streets could be made, large enough to thoroughly rebuild eight or ten miles each year, in a short time our streets could be brought into such good condition that a moderate annual amount would be sufficient to keep them so. Among the most important streets which ought to be thoroughly rebuilt as soon as possible are Prospect Street, entire; Portland Street, entire; Pearl Street, from Massachusetts Avenue to Putnam Avenue; Brookline Street, from Massachusetts Avenue to Henry Street; Cambridge Street, from Massachusetts Avenue to Dana Street; Garden Street, from Follen Street to Massachusetts Avenue; Mount Auburn Street, from Putnam Square to Brattle Square; Concord Avenue, from Huron Avenue to Fitchburg Railroad crossing; and Broadway, from Burleigh Street to Cambridge Street. Some of these streets are traversed by street railway tracks, and should be paved either with granite blocks, vitrified bricks, or some equally durable material. This is particularly true of Prospect Street, which on account of the large amount of heavy teaming, is almost impossible to keep in repair as at present constructed.

On the 22nd of February last, it was discovered that the walls of the Hampshire Street stable had spread to such an extent as to render its occupancy hazardous, if not dangerous; all the horses were therefore removed at once and steps taken to put it in safe condition. It was found necessary to put in iron tie rods and trusses, raise the centre of the building and relay the four brick piers in the basement, take out eight wooden columns and substitute iron ones, and to reinforce the walls above the attic floor on each side by means of new timbers and iron bolts. The work was of such nature that it seemed desirous to have it done by the day and with the assistance of the Superintendent of Buildings, it was completed in a thorough manner. The cost of this work was about $1,800.00, and a little more than $400.00, additional, was expended for pointing and other necessary repairs on this building.

Only about one-third of a mile of new streets has been accepted during the past year, in accordance with the suggestion made in the annual report of 1896 that whenever new streets were accepted, they should be required to be in proper condition, or provision should be made to make them so. The list is as follows:—

	Length.
Langdon Street, from Massachusetts Ave. to Chauncy St . . .	745 feet
Marney Street, from Portland Street to Berkshire Street . . .	300.39 "
Palermo Street, from Windsor Street to Willow Street . . .	311.65 "
Thorndike Street, from Ninth Street to B. & A. R. R. . . .	199.88 "
Thorndike Street, from B. & A. R. R. to Portland Street . . .	209.43 "

New Streets, Clay Land District.

Appropriation		$4,000 00
EXPENDED.		
Labor	$672 12	
Teaming	715 55	
Field stone	1,057 38	
Freight on stone and gravel	193 00	
Gravel	85 50	
Iron studs for catch basins	10 56	
		2,734 11
Balance		$1,265 89

By an order approved October 12, 1898, the above amount was transferred from the appropriation for Sewer Department Clay Lands to this department, for the purpose of building Garden Street, from Walden Street to Field Street. This is one of the thirteen streets laid out in 1896 through land owned by the Bay State Brick Company and is the only one through which there is any considerable amount of travel at present.

The season had so far advanced when the transfer of appropriation was made, that we have been unable to complete the work.

The roadway has been ballasted about ten inches deep for about two-thirds of the entire length, and cracked stone to the depth of about six inches has been spread over about one-half of the ballasted portion of the road. It will not be possible to complete the work with the balance unexpended, and an additional amount will be included in the annual estimates when submitted.

Paving, Edgestones and Sidewalks.

Appropriation		$35,265 00
EXPENDED.		
Labor	$16,150 64	
Teaming	2,764 18	
Bricks	4,287 27	
Edgestones and circles	5,214 12	
Gutter and round stone	2,836 92	
Granite flagging	494 52	
Freight and loading gravel from bank at Acton	1,208 51	
Concrete crossings and gutters	1,705 04	
Allowance on artificial stone sidewalks	395 93	
Recutting paving blocks	57 12	
Hardware, tools, etc.	110 48	
Lumber, cement and sundries	57 12	
		$35,264 25
Balance		$ 75

The above amount has been expended for laying new edgestones and brick sidewalks, repairs to sidewalks already laid, and for crossings, driveways and all other paving work done by the department.

The following schedule shows the cost of the various kinds of work done under this appropriation during the past year: —

New edgestones and brick sidewalks	$22,967 13
Repairs to old edgestones and brick sidewalks	5,448 03
Artificial stone sidewalks	395 93
Concrete crossings and gutters	1,705 04
Granite crossings (new)	936 78
" " (repairs)	1,254 77
Driveways, etc.	478 73
Granite paving, Central Sq.	1,165 22
" " Crescent Ave.	438 00
" " Bridge and First Streets	374 62

The following tables show by districts the new sidewalk work done during the year, viz., the number of feet of new circles and edgestones set, and square yards of new brick sidewalk laid, with the expense on each street: —

District No. 1.

STREETS.	Linear Feet Straight Curb.	Linear Feet Circle Curb.	Square Yards Brick Sidewalk.	Amount.
Berkshire Street, from No. 100 to No. 120	. . .	. . .	170.7	$138 76
Brookline Street, from Pacific Street to Pilgrim Street	58.6	9.5	. . .	74 46
Cambridge Street, between No. 984 and No. 992	. . .	. . .	61	53 44
Chestnut Street, between Hampshire Street and Pearl Street	85.1	. . .	. . .	113 91
Columbia Street, between Hampshire Street and Market Street	187.7	. . .	153.2	300 14
Hampshire Street, at junction of Cambridge Street	31.4	. . .	46.2	69 76
Hampshire Street, corner Bristol Street	58	. . .	114	200 11
Hancock Street, between Massachusetts Ave. and Harvard Street	. . .	. . .	312	276 53
Hancock Street, east from Kinnaird Street, 80 ft.	83.5	. . .	. . .	73 47
Kinnaird Street, between Hancock Street and No. 68	28.1	9.6	. . .	35 63
Leonard Avenue, from No. 21 to No. 23	. . .	. . .	27.8	23 24
Moore Street, west, between Washington Street and School Street	97.4	8.8	56.5	136 90
Park Street, No. 14	14	. . .	27.6	35 98
Pleasant Street, Nos. 88, 90, 92	. . .	. . .	63	73 37
Portland Street, between Bristol Street and Cambridge Street	1,379	57.7	. . .	1,233 62
Portsmouth Street, from No. 36 to No. 38	. . .	. . .	26	23 93
Prospect Street, from Cambridge Street to Somerville line	326.5	. . .	438	553 91
Seventh Street, between Cambridge Street and Gore Street	151	. . .	61.2	330 37
State Street, between Windsor Street and Village Street	260.5	9.4	. . .	292 85
Washington Street, between R. R. Crossing and No. 6	. . .	. . .	89.7	79 44
Totals	2,760.8	95	1,646.9	$4,119 82

District No. 2.

STREETS.	Linear Feet Straight Curb.	Linear Feet Circle Curb.	Square Yards Brick Sidewalk.	Amount.
Allen Street, between Massachusetts Avenue and Orchard Street	303.7	9.5	144.4	$593 56
Athens Street, at lower end	27	. . .	9	35 55
Avon Hill Street, from No. 102 to No. 104	. . .	. . .	53.5	62 21
Bates Street, between Avon Hill Street and Raymond Street	731.7	19	. . .	711 82
Beech Street, between Massachusetts Avenue and Orchard Street	279.6	. . .	167	471 96
Berkeley Street, No. 12	88.6	. . .	. . .	117 85
Bow Street, front Peter Burns' estate	119	. . .	. . .	182 73
Bow Street, between Plympton Street and Linden Street	173.5	9.5	158.8	323 65
Buena Vista Park	507.9	152.2	. . .	923 43
Cambridge Street, No. 1643	103.8	12.6	148.4	301 49
Cambridge Street, between Irving Street and Quincy Street	946.3	25	1,252.6	2,171 77
Cambridge Street, northeast side, between Hemenway Gymnasium and Massachusetts Avenue	307	38.5	331	478 08
Concord Avenue, No. 36	96.4	. . .	. . .	125 06
Cleveland Street, from Dana Street, about 70 ft.	70.8	. . .	32.6	90 36
Cowperthwaite Street, No. 39	59.9	. . .	57.5	152 78
Crescent Avenue, at Hewes' Pottery	237	. . .	. . .	186 00
Dana Street, west side, between Broadway and Harvard Street	346.8	9.6	312.3	622 93
Dana Street, east side, between Broadway and Harvard Street	467.8	29.5	359	904 03
DeWolfe Street, between Mill Street and Park line	409.9	35.3	267.9	814 50
Dunster Street, front estate W. E. R. R.	58.7	. . .	78.2	91 11
Dunster Street, between Massachusetts Ave. and Mt. Auburn St.	. . .	. . .	54	50 13
Ellery Street, between Harvard Street and Broadway	502.5	. . .	. . .	669 54
Flagg Street, between Banks Street and Beaver Street	622.8	19	446.7	1,211 48
Amounts carried forward	6,460.7	359.7	3,872.9	$11,292 02

District No. 2 — Concluded.

STREETS.	Linear Feet Straight Curb.	Linear Feet Circle Curb.	Square Yards Brick Sidewalk.	Amount.
Amounts brought forward	6,460.7	359.7	3,872.9	$11,292 02
Grant Street, between Banks Street and DeWolfe Street	1,128	. . .	. . .	932 91
Harvard Street, at Beck Hall	190	. . .	164.7	421 00
Harvey Street, from No. 10 to No. 12	84	9.2	. . .	124 92
Highland Street and Reservoir Street	10.9	9.7	. . .	47 06
Holyoke Street, between South Street and Mill Street, both sides	259.3	23	. . .	347 35
Huron Avenue and Cushing Place	20.8	. . .	. . .	30 20
Hubbard Avenue, at Nos. 24, 26, 52, 54	96.6	. . .	. . .	125 12
Irving Street, between Cambridge Street and Broadway	404	. . .	281.6	750 47
Kidder Street, from No. 12 to No. 18	. . .	. . .	46.5	43 09
Kidder Street, No. 16	. . .	. . .	21.3	20 46
Kirkland Street, at Kirkland Road	23.8	19	. . .	65 36
Linden Street, between Bow Street and Massachusetts Avenue	369.4	. . .	155	484 86
Linnæan Street, between Avon Hill Street and Garden Street	635.5	. . .	635	1,355 78
Plympton Street, west side, between Massachusetts Avenue and Bow Street	358.3	9.5	211.7	612 11
Plympton Street, east side, between Bow Street and Massachusetts Avenue	281.7	. . .	. . .	346 43
Sherman Street, at Walden Street	59.8	. . .	. . .	99 05
Sparks Street, between Brattle Street and Mt. Auburn Street	914	19	. . .	1,126 12
Walden Street, corner Sherman Street	10	. . .	. . .	42 13
Walden Street, at Sherman Street	50	. . .	. . .	108 10
Walden Street, between No. 16 and No. 34	209.8	28.5	149.5	472 77
Total amounts	11,566.6	477.6	5,538.2	$18,847 31

The demand for new edgestones and brick sidewalks has been almost fully met this year, there remaining but few petitions and uncompleted orders on file at the close of the season. A new departure in the construction of street crossings has been made this year, about fifty of tar concrete having been laid on streets where the travel is not very heavy. These crossings possess the advantage of being easily kept clean, there is an entire absence of any jolt or jar when driving over them, and they are kept in repair by the contractors for five years from the date of their construction.

On some of the residential streets in the city, particularly in Ward One, a desire has been created for artificial stone sidewalks. In all such cases, permission was granted to the abutters to contract with responsible parties for laying, at their own expense, sidewalks of this material under the direction and to the satisfaction of the Superintendent of Streets; an allowance of six cents per square foot, based on the cost to the city for laying brick sidewalk, was paid by this department to the contractors, that amount being deducted from their bills to the abutters. Under this arrangement, about 26,500 square feet of artificial stone sidewalk were laid in 1896 and 1897, and following the same policy, about 6,600 square feet of sidewalk of this material have been laid during the past season. These sidewalks are kept in repair without cost to the city for five years, every contractor being required to file a bond to that effect before a permit is granted him to do the work.

Rebuilding Massachusetts Avenue.

Appropriation	$20,000 00

EXPENDED.

Labor	$7,378 74	
Teaming	2,812 52	
Ballast stone	4,976 19	
Cracked "	58 50	
Field "	4,492 29	
Weighing " (ballast)	97 12	
Steel jaws for crusher	117 99	
Tools and sundries	66 65	
		$20,000 00

This appropriation was made for the continuance of the work begun in 1897 of rebuilding that part of Massachusetts Avenue, between the Arlington line and Harvard Square, formerly called North Avenue.

About $1,200.00 of the above amount was expended for repaving gutters, etc., and the balance for laying Telford Macadam from Chester Street, the point where we left off last year, to the Fitchburg Railroad bridge on the westerly side and to the east line of Davenport Street, on the easterly side, a total of 10,930 square yards.

The work was done in the same careful and thorough manner as that of ast year, and the same precautions were taken to prevent its being dug up, within at least two years. Twenty-nine thousand, nine hundred and seventy square yards, a little more than half, of the avenue have been completed at an expense of $60,000.00, leaving twenty-four thousand, one hundred and sixty square yards to be built to complete the work to Garden Street.

I presume it is the intention to finish the construction on this avenue as soon as possible, and estimates of the cost will be laid before the Finance Committee when the budget for next year is under consideration.

Watering Streets.

Appropriation		$24,500 00
EXPENDED.		
Foreman	$741 00	
Sprinkling, contracts	20,505 82	
Temporary clerical assistance, stationery and printing	141 75	
Labor, repairing and painting carts	1,353 26	
Hardware, springs, etc.	512 14	
Lumber, carpenter and mill work	456 90	
Paints, oils, brushes, etc.	470 50	
Parts for sprinklers	134 83	
Stand pipe repairs	22 88	
Bicycle, repairs and sundries	75 70	
		24,414 78
Balance		$85 22

Following the system begun in 1895, the streets have been watered under what may now be considered the settled plan for this work. The city is divided as nearly as possible into equal sections, to each of which is assigned a cart with instructions that the streets in that section must be kept properly watered at all times. The service has, on the whole, been generally satisfactory and complaints have been comparatively few.

The wisdom and economy of this plan has been clearly demonstrated, the cost, even during the past unusually rainy season, being less than under the old plan of employing teams by the hour.

Beyond the usual repairs to watering carts to be made during the winter months, our plant is in excellent condition and no new carts will be required during the coming year.

In General.

The past year has been one of unusual activity with the corporations which have occasion to dig up our streets, and there is a prospect that a large amount of this work will be done during the coming year. In spite of the best intentions and the most earnest efforts to restore streets which have been dug up, to their original condition, it can very seldom be satisfactorily

done, and almost invariably results in increased cost for the repairs and care of the streets.

The very complete system of granting permits to parties using or opening streets, established under the advice and assistance of the City Solicitor, has made it possible for us to exercise complete control over the work in progress, and has, I believe, resulted in a more general observance of the ordinances in relation thereto.

The operation of this system entails a large amount of clerical work and very considerably increases the office work of the department. It is the custom in some cities to charge a nominal fee for each permit granted for the use of streets, the amount so received being applied to the payment of the expense of carrying on the system. I would respectfully suggest that the subject be investigated and if thought desirable an ordinance regulating the charges, etc., be adopted.

We have relied to a considerable extent, for a number of years, for a supply of road material on field stone collected from farms and fields in the surrounding towns and brought to our crushers. This material is of varying quality and is not the best for building streets, although it answers the purpose for ordinary patching work. If it were possible to obtain a ledge of trap rock of uniform hardness, from which we could obtain stone for this purpose, our macadamizing would be of a more durable character.

I would respectfully suggest that an investigation be made into the matter, and if a suitable ledge can be found, steps be taken to secure it for the use of this department.

Following is a schedule of property in charge of this department:—

Real Estate.

City yard and stable, Raymond Street:—		
Land	$11,000 00	
Stable, sheds, scales, etc.	33,000 00	
		$44,000 00
City Stable, Hampshire Street:—		
72,661 square feet of land, Assessors' valuation.	$30,000 00	
Stable, sheds and scales, including old police station	17,000 00	
		47,000 00
Yard and pound, east side of Norfolk Street, 39,600 square feet of land, Assessors' valuation,		$12,000 00
Mill Pond property, 70,684 square feet of land, Assessors' valuation		29,000 00
Land at Acton, Mass., gravel bank		7,000 00
Total real estate		$139,000 00

Amount carried forward $139,000 00

Amount brought forward		$139,000 00

Personal Property.

61 horses	$ 9,000 00	
48 watering carts	14,400 00	
46 carts (29 single, 17 double)	4,600 00	
63 set of harness	1,500 00	
23 sleds, 8 snow-plows, 1 sleigh	2,500 00	
2 snow levelers, 12 gutter plows	475 00	
1 buggy, 4 foremen's wagons	250 00	
3 tool wagons, 3 bicycles	200 00	
2 hayracks, 1 caravan, 2 pungs	425 00	
3 steam road rollers	6,000 00	
1 horse roller	150 00	
4 road machines	800 00	
2 road scrapers	600 00	
5 street sweepers	750 00	
Stone-crushing plant, Raymond Street yard	6,000 00	
Stone-crushing plant, Hampshire Street yard	6,000 00	
Tools and stable furniture	4,000 00	
Lumber, iron, paints, oils, etc.	1,800 00	
367 feet of straight edgestone	146 80	
437 feet circle edgestone	26 22	
44 linear feet granite flagging	24 64	
7,300 paving blocks	152 30	
55,000 bricks	687 50	
125 tons field stone	93 75	
		$60,621 21
Total		$199,621 21

I desire to signify to the members of the City Council my appreciation of their courtesy and consideration; I am particularly indebted to the members of the Joint and Standing Committees on Roads and Bridges, and venture to express the hope that my efforts to conduct the affairs of the department for the best interests of the city may not have been entirely unsuccessful.

I renew my acknowledgments to the various officials of the city for their ready co-operation in matters in which we were mutually interested, and again testify to the general fidelity and efficiency of the employees of the department.

Respectfully submitted,

CHAS. A. BROWN,

Superintendent of Streets.

REPORT OF THE CHIEF OF POLICE

To His Honor the Mayor, and the City Council of the City of Cambridge: —

GENTLEMEN:— In compliance with the City Ordinance, I have the honor to present my annual report of the work of the Police Department for the year ending November 30, 1898.

The whole number of arrests for the year has been three thousand one hundred and eighty-five (3,185) against three thousand three hundred and seventy-five (3,375) last year, a decrease of one hundred and ninety (190).

Males	2,988	Adults	2,625
Females	197	Minors	560

The offences for which arrests have been made are as follows:—

Adultery	3	Embezzlement	13
Arson	2	Escaped prisoners	10
Assault and battery	163	Evading car-fare	1
Assault, felonious	5	Exposure of person	4
Assault of officer	8	False pretences	1
Assault, indecent	4	Forgery	2
Assault with intent to kill	1	Fornication	9
Assault, mutual	2	Gaming, or present at	20
Attempt to pick pockets	1	Giving entertainment without license	3
Attempt to rescue prisoner	1	Highway robbery	2
Attempt to break and enter	6	Having in possession short measure	4
Bastardy	12	Idle and disorderly	23
Being present where gaming implements were found	6	Incest	2
Breaking and entering	62	Insane	13
Buying registered bottles	1	Illegal transportation	10
Capias	32	Illegal sale of liquor	2
Common drunkard	4	Keeping liquor with intent to sell	2
Conspiracy	1	Keeping unlicensed dog	3
Contempt of court	1	Keeping open shop on Lord's Day	3
Conveying leased property	4	Liquor nuisance	18
Concealing mortgaged property	2	Larceny	180
Cruelty to animals	5	Larceny from building	8
Criminal libel	1	Larceny from person	5
Dipsomaniac	1	Lewd and lascivious	2
Disturbing public peace	286	Malicious mischief	40
Disturbing public meeting	5	Manslaughter	1
Disorderly conduct	1	Non-support	44
Drunkenness	1,754	Neglected children	18
Driving away a team	1	Obtaining money by false pretence	5
Defacing	1		
Disturbance on street car	13		
Discharging fire-arms	2		

Obtaining goods by false pretence	5	Stubborn children	22
Obstructing street car	3	Stealing a ride	2
Promoting policy	5	Suspicious persons	16
Pedling without license	3	Surety of the peace	2
Pickpockets	1	Tramps	5
Profanity	4	Threatening	4
Polygamy	1	Truants	11
Receiving stolen goods	4	Trespass	16
Runaways	8	Vagrants	31
Robbery	11	Violation of park rules	9
Rape	3	Violation of City ordinance	106
Sodomy	1	Violation of liquor law	1
Safe keeping	12	Violation of milk law	15
		Walking on railroad track	45

Whole number of lodgers, 326.

Male	322	Female	4
Adults	301	Minors	25
White	321	Colored	5

Nativity of Prisoners.

United States	1,704	Poland	13
Ireland	862	Arabia	2
British provinces	280	West Indies	5
England	110	Egypt	2
Sweden	60	Greek	2
Scotland	35	Prussia	1
Germany	32	Finland	1
Italy	21	Norway	5
Portugal	6	Austria	4
Russia	34	Wales	3
France	1	Asia	2

Miscellaneous Business.

Accidents	82	Defective streets and sidewalks	893
Buildings found open and secured	296	Disturbances suppressed	113
Cases investigated	1,178	Dogs killed	35
Dangerous buildings	3	Fire alarms given	10
Dead bodies found	17	Fires extinguished without alarm	2
Defective cesspools	6	Lost children restored	207
Defective gas pipes	13	Sick and injured persons assisted	44
Defective water pipes	65	Stray teams put up	43
Defective hydrants	2	Street obstructions removed	16
Defective lamps	3,227	Water running to waste	15
Defective wires	88		

Amount of property reported stolen	$11,684 50
Amount of property recovered	8,479 00

City Property In Use by Police Department.

219	badges	$150 00
87	belts and billies	108 00
8	books	26 00
4	bookcases	32 00
8	bedsteads	40 00
	Bedding and blankets	40 00
1	buggy	275 00
2	bureaus	3 00
8	clocks	25 00
80	chairs	100 00
1	carpet	20 00
	Letter press and stand	10 00
200	copies of police rules	40 00
11	desks	125 00
1	easy chair, matron's	10 00
5	horses	500 00
6	harnesses	120 00
5	horse blankets	15 00
4	halters	1 00
1	hat rack	50
6	inkstands	3 00
36	lanterns	27 00
1	lounge	5 00
8	mirrors	14 00
3	maps	15 00
10	rugs	20 00
9	pairs of handcuffs	27 00
1	police van	300 00
1	ambulance	400 00
3	police signal systems	12,000 00
	Amount carried forward	$14,451 50

	Amount brought forward	$14,451 50
3	patrol wagons	1,000 00
93	revolvers	450 00
	Ropes and stakes	10 00
3	robes, carriage	20 00
1	rogues' gallery	150 00
3	saddles and bridles	12 00
2	safes	200 00
95	short billies	42 50
8	spittoons	2 00
1	sleigh	25 00
1	stove	8 00
2	straps and weights	1 00
4	stretchers	6 00
1	telephone line	300 00
3	thermometers	1 50
6	tables	24 00
40	tin dippers	9 00
25	towels	4 00
1	typewriter and desk	140 00
2	umbrella stands	2 00
1	wagon van, old	25 00
5	waste baskets	1 00
4	water coolers	30 00
1	wardrobe	10 00
6	water pails	1 00
2	wagon jacks	2 00
	Operating table and chair	37 50
3	medicine cabinets	75 00
		$17,040 00

Signal Systems.

In the three signal districts during the past year there have been :—

Duty calls by officers	364,891
Telephone calls	16,542
Wagon calls	1,694
Miles run	2,895.12
To fires	38
Sick and injured persons carried to hospital	25
Sick and injured persons carried home	12
Other runs	137

Expenditures.

Boarding horses	$300 00
Buttons for department	74 17
Boston Elevated Railway Company	250 00
Boston Ice Company	14 80
Cambridge Gas Light Company	782 92
Cambridge Electric Light Company	110 25
Cleaning stations	231 75
Cloth for department	527 77
Clipping horses	5 00
Carriage hire	5 00
Coal for department	292 25
Amount carried forward	$2,593 91

Amount brought forward	$2,593 91
Directories for department	18 00
Diaries for department	103 33
Expressing	3 65
Fresh Pond Ice Company	29 95
Feeding prisoners	57 97
Gas Consumers' Association	3 00
Hay and grain	462 52
Horse hire	21 00
Hat numbers for department	41 43
Horses for department	300 00
Heating and care of buildings	890 00
Medical attendance	37 00
Medicines	7 45
Manuals for department	181 73
New England Telegraph and Telephone Company	583 88
Photographs for rogues' gallery	24 50
Printing	182 87
Policemen, services of	100,880 53
Repairs of wagons	329 30
Repairs on harnesses	25 15
Repairs on revolvers	13 17
Revolvers for department, new	21 00
Repairs of buildings	466 10
Salary of Chief of Police	1,800 00
Salary of Deputy Chief of Police	1,500 00
Salary of Captains and Inspector	5,599 68
Shoeing horses	156 23
Supplies for stations	387 64
Travelling expenses	41 60
	$116,762 59

Appropriation	$117,000 00
Expenditures	116,762 59
Balance unexpended	$237 41

Expenditures	$116,762 59
Receipts	6,082 76
Balance showing actual cost	$110,679 83

The Force.

The organization of the force consists of a chief, deputy chief, three captains, one chief inspector with the rank of captain, one assistant inspector with the rank of lieutenant, seven sergeants, eighty-three patrolmen, five reserve officers, four drivers of patrol wagons, two drivers of ambulance, and two matrons.

One sergeant and twenty-four patrolmen are on duty in the day-time; one sergeant at the Public Library; one patrolman is stationed at the City Hall, one detailed as clerk at Police Headquarters, one in Police Station 4, and twenty-one for street duty.

During the night-time six sergeants and sixty-four patrolmen are on duty: one as house officer in Station 4, two in the wagon houses, and sixty-one on street duty, divided into two reliefs.

Changes.

January 1st of this year there were appointed under Civil Service Rules five reserve officers which were placed on regular duty, making an increase of five officers.

During the past year two officers have died, and two have resigned; the vacancies caused by death and resignation were filled from the reserve force, and four men selected under Civil Service Rules to fill the vacancies in the reserve force, caused by the promotions.

Patrolman Henry C. Jones was promoted to the rank of assistant inspector, and detailed to assist the City Solicitor.

Patrolman M. J. Conroy was promoted to the rank of sergeant.

Edward J. Malley was appointed March 20th, 1894, died January 26th, 1898.

Timoth J. Hartnett was appointed January 24th, 1888, died September 2d, 1898.

No-License Law.

As in former years, a constant effort has been made to control the illegal sale of intoxicating liquor. There are very few places, if any, where liquor can be found.

Each year under the no-license law the so-called kitchen bar-rooms grow less in number.

Ambulance.

The ambulance has been called to 171 accidents and 40 removals.

Matrons.

There were one hundred and ninety-seven females arrested during the year, a decrease of eighteen from last year; all have received the care of the matrons.

Uniform Cloth for the Department.

There has been purchased during the year cloth for the department to the amount of $527.77. The money for the same has been paid to the City Treasurer. There is cloth on hand to the amount of $115.00.

Recommendations.

I would respectfully recommend the remodeling of the building owned by the City, situated on Massachusetts Avenue, used as a police station and formerly occupied in part by the fire department.

I would also recommend the appointment of two lieutenants in the police department, to be assigned to night duty.

As I feel that it is a great necessity I would again renew my recommendation that the cell-room in Police Station 2 be remodeled by taking out the brick cells and placing in their stead improved iron cages, thereby giving seven additional cells, which are very much needed, as it is often necessary to put more than one prisoner in a cell at a time for want of room. This change will give much better light and ventilation as well as additional cells.

Conclusion.

To His Honor the Mayor, the City Council, the City Solicitor and all others who have so kindly co-operated with me in the performance of the duties pertaining to my office, I desire to express my sincere thanks.

LOTHROP J. CLOYES,
Chief of Police.

ANNUAL REPORT OF THE CHIEF ENGINEER OF THE FIRE DEPARTMENT

CHIEF ENGINEER'S OFFICE, CITY HALL,
CAMBRIDGE, MASS., December, 1898.

To His Honor the Mayor and the City Council :—

GENTLEMEN :— Herewith I have the honor to submit to you the annual report of the Fire Department for the fiscal year ending November 30, 1898, being my twentieth annual report.

It contains a statement showing its condition; also a record of fires and alarms of fires that occurred, from all causes, during the year, with the amount of losses and insurance as far as ascertained.

Manual Force.

The manual force, at the present time, consists of a chief engineer, two district chief engineers, a chief's driver, and one hundred and twenty-two officers and men, divided into twelve companies, viz. : seven steam engine companies of twelve men each, two chemical engine companies of three men each, two ladder companies of twelve men each, and one ladder company "Arial ladder" of eight men. Forty-nine are permanently employed, and seventy-seven are call men. The permanent force was increased during the year, by the appointment of three men, and the office of permanent lieutenants, in chemical engine and ladder companies, established.

Apparatus.

The apparatus generally is in good working condition, with the exception of Engine No. 5, which was sent to the Manchester Locomotive Works, Manchester, New Hampshire, November 30, to be refitted with a new boiler and general repairs made on its works, and repainted.

The ladder trucks are very much in need of being overhauled and painted. This work has been neglected because of the want of a spare truck that could be used while making the necessary repairs. I would therefore recommend that a new truck be purchased.

I would also recommend that a hose wagon be purchased to take the place of the hose carriage, which has been in service for the last thirty years, at Engine House No. 4.

Hose.

The total amount of two-and-one-half inch cotton rubber-lined hose now in use by the several engine companies and in serviceable condition is 13,250 feet. There is also 700 feet of one-inch rubber and 250 feet of two-inch cotton and linen hose in use by Chemical Engine companies. During the year 200 feet of two-and-one-half inch hose was bought and 500 feet condemned.

Horses.

Five horses have been purchased and the same number disposed of by exchange during the year. There are thirty-five horses in the service, and with few exceptions, are in good condition and receive good care from those who have charge of them.

Houses.

During the year the several houses of this department and the grounds around them, have had such repairs made upon them as was found necessary. The houses in general are in good condition and will need only the customary repairs the ensuing year.

I wish to call your attention to the necessity of providing a building for the storage of the spare apparatus for which this department is greatly in need of. I hope this matter will receive its proper consideration by you.

Appropriation and Expenditures.

The appropriation for the maintenance of this department for the year ending November 30, was $80,200.00. The receipts were $108.75.

The principal items of expenditure were as follows: —

Apparatus and repairs of	$964 02
Bedding and furniture	89 30
Buildings, repairs on	2,240 21
Fuel for houses and engines	2,006 56
Gas and electric light	818 69
Hardware and tools	165 92
Harnesses and repairs of	327 50
Hay, grain and straw	3,312 06
Horses and men (extra)	587 00
Horses	745 00
Horseshoeing	671 75
Hose and repairs of	476 55
Incidentals	172 80
Pay-roll	66,940 96
Washing	181 93
Miscellaneous	452 64
Total	$80,152 89
Balance unexpended	47 11

Fires and Alarms.

The number of fires and alarms for the year was two hundred and nine, three less than the previous year. The department, or a portion of it, responded to one hundred and thirty-four bell alarms and seventy-five still alarms. This does not include five second alarms and one general alarm that was given.

The total losses, as near as could be ascertained, together with the amount of insurance, and the amount of insurance paid, was as follows: —

	Losses.	Insurance.	Insurance Paid.
On Buildings	$98,719 54	$522,175 60	$97,594 54
On Contents	156,468 21	582,447 82	136,458 21
Totals	$255,187 75	$1,104,623 42	$234,052 75

Discharges.

George F. Tibbetts, a call captain of Engine Company No. 4, February 28, at his own request.

Patrick F. Dunlea, a call member of Engine Company No. 3, April 28, at his own request.

Augustine B. Osborne and John W. Johnston, call members of Engine Company No. 1, April 30, at their own request.

Thomas H. McCourt, a call member of Engine Company No. 3, November 25, at his own request.

James P. Welsh, a call member of Engine Company No. 6, November 30, at his own request.

Willard H. Poole, a call member of Ladder Company No. 1, November 30, at his own request.

Appointments.

Daniel A. McCaughin, appointed a call captain, February 28, assigned to Engine Company No. 4.

John T. Henderson, appointed a call lieutenant, March 11, assigned to Engine Company No. 4.

George L. Vocell, appointed a call member, March 11, assigned to Engine Company No. 4.

Louis C. Clark and George W. Butler, appointed permanent lieutenants, October 25, and assigned to Chemical Engine Companies Nos. 1 and 2, respectively.

Arthur G. McArthur, Benjamin McArthur and Dennis R. Sullivan appointed permanent members October 18.

Edward F. Conroy, James M. Casey and Cutler L. Vose appointed permanent lieutenants October 25, and assigned to Ladder Companies Nos. 1, 2 and 3, respectively.

Decease of Members.

I am called upon for the first time to report to you the deaths of two call members, who, while in the performance of their duties, were fatally injured.

James F. Dalton, a call member of Ladder Company No. 2, for the past twenty-five years, was fatally injured at a fire in the works of the John P. Squire Company, on November 10, by being thrown from a ladder upon which he was working, he being overcome by smoke and flame bursting forth upon him from a door which he had just opened, and caused him to fall to the pavement below. He received such injuries as caused his death in about fifteen minutes after.

Matthew L. Fairbairn, a call member of Ladder Company No. 2, for nearly two years, while working at a fire in the works of the John P. Squire Company on November 21, was severely injured by falling walls. The nature of his injuries were such as to cause his death on Wednesday the 23d day of November.

A copy of the resolutions passed by the City Council follow:

CITY OF CAMBRIDGE,

IN BOARD OF ALDERMEN, November 15, 1898.

Whereas: James F. Dalton, a member of the Fire Department of this City for many years, bravely met his death on the morning of November 10, at the fire on the premises of the John P. Squire Company, it is

Resolved: That the City Council of Cambridge hereby pays its tribute of respect and honor to the memory of Lieut. James F. Dalton of Hook and Ladder Truck, No. 2. He gave faithful service in the Fire Department of our City for twenty-five years, interrupted only by that other service which he gave to his country during the war of the rebellion.

A veteran of the war of the rebellion, and also of the Fire Department, he at last laid down his life in his efforts for the protection of other lives and property.

"Now to his ashes honor, peace be with him, and choirs of Angels sing him to his rest."

Adopted unanimously by a rising vote. Sent to the Common Council for concurrence.

Attest: EDWARD J. BRANDON, *City Clerk.*

In Common Council, November 15, 1898. Concurred.

Attest: EDWARD A. COUNIHAN, *Clerk.*

Executive Department, November 21, 1898.

Approved: ALVIN F. SORTWELL, *Mayor.*

Mayor's Records, Vol. 6, page 398.

A true copy.

Attest: EDWARD J. BRANDON, *City Clerk.*

CITY OF CAMBRIDGE,

IN BOARD OF ALDERMEN, November 29, 1898.

Whereas: This City has three times during the present month been visited by destructive fires, entailing not only serious loss of valuable property, but the far greater loss of precious human lives,—it seems fitting that some recognition should be shown of the unflinching valor displayed on such occasions by the members of our Fire Department, who so promptly respond to the midnight call, and hasten to save and protect the property of our citizens; it is

Resolved: That the City Council of Cambridge takes this occasion to make public recognition of the value of the services rendered by our brave firemen at all times, whenever and wherever duty calls them, and more especially at the recent fires at the J. P. Squire Company, and on Brattle Street. Their unselfish labors given on all occasions calling for courage and determined effort, and undeterred by the risk of imminent personal danger, deserves and receives our hearty commendation.

December 6, 1898. Adopted.

Sent to the Common Council for concurrence.

Attest: EDWARD J. BRANDON, *City Clerk.*

In Common Council, December 6, 1898. Concurred.

Attest: EDWARD A. COUNIHAN, *Clerk.*

Executive Department, December 7, 1898.

Approved: ALVIN F. SORTWELL, *Mayor.*

Mayor's Records, Vol. 7, page 6.

A true copy.

Attest: EDWARD J. BRANDON, *City Clerk.*

CITY OF CAMBRIDGE,

IN BOARD OF ALDERMEN, December 6, 1898.

Another member of the Fire Department of this City, never shrinking from an earnest and devoted performance of trust, has sealed with his life his devotion to duty.

The death of Matthews Louis Fairbairn, whose young life was closed on November 21, last, while in the execution of duty as a member of the Fire Department of this City tends to increase the weight of sorrow which had fallen upon the community through the recent unexpected taking away of a fellow-member in the Department. Born in Cambridge, he was a good product of her institutions, and at her call, he presented to her the highest votive offering of man — his life.

With all the hopes and ambitions of youth, fired with a zeal that knew not danger, he was stricken without warning and his memory only, fragrant with the knowledge of his fearlessness and fidelity, remains to be a comfort and staff to his afflicted relatives. Therefore be it

Resolved: That the City Council, recognizing in him the possession of a heroic character and as a simple tribute to his worth, publicly records its appreciation of his efforts as a citizen as well as a member in the Fire Department. His example will ever stand forth, an inspiration and a guide to his fellow-members in the public service; his sad end will be a token to future generations that he hesitated not when duty called.

"May his spirit be at rest."

Adopted unanimously by a rising vote.

Sent to the Common Council for concurrence.

Attest: EDWARD J. BRANDON, *City Clerk.*

In Common Council December 6, 1898.

Concurred unanimously by a rising vote.

Attest: EDWARD A. COUNIHAN, *Clerk.*

Executive Department, December 7, 1898.

Approved: ALVIN F. SORTWELL, *Mayor.*

Mayor's Records, Volume 7, Page 6.

A true copy.

Attest: EDWARD J. BRANDON, *City Clerk.*

Accidents.

The following named call members of the department were injured while working at fires:

Lincoln E. Wheeler severely strained his body while taking down a ladder February 28. Off duty for forty-one days.

James P. O'Neil, body and limbs bruised by the falling of a building May 8. Off duty sixteen days.

Joseph T. Vocell, head cut by falling slate June 11.

John Haley, overcome by heat and smoke and falling down stairs October 26. Off duty twenty-five days.

Thomas A. Montgomery, hand severely burned November 10. Off duty twenty-one days.

William D. Donovan, hand cut by slate November 10. Off duty seven days.

Louis J. Anshelm, severely injured about the head and body by falling walls November 21. Unable to do duty since that date.

James H. Skehan lost his right eye by a piece of freestone falling and striking him across the nose and eye November 21. Unable to do duty since that date.

Josiah P. Parsons, leg severely injured by the falling of a floor upon which he was working November 21. Unable to do duty since that date.

Edward P. Donahue, legs injured by the falling of a floor upon which he was working November 21. Unable to do duty since that date.

Samuel Engler, a member of Engine Company, No. 33, Boston Fire Department, knee severely injured by the falling of a floor upon which he with other members of his company was working November 23. Unable to do duty since that date.

Conclusion.

In closing this report I wish to return my thanks to the Honorable Mayor, the City Council, and the Committee on Fire Department for the interest manifested by them in all matters pertaining to this department during the year.

The police are also entitled to the thanks of this department for their prompt arrival at fires and the valuable assistance rendered.

My thanks are also due the officers and members of the Fire Department for their prompt and faithful discharge of duty the past year.

To the Boston and Somerville Fire Departments my thanks are due for their prompt and efficient services at the fire in the works of the John P. Squire Company, on November 21.

Respectfully submitted,

THOMAS J. CASEY,

Chief Engineer.

APPENDIX

ROLL OF OFFICERS AND MEMBERS.

Engineers.

Name.	Rank.	Age.	Residence.
Permanent Force.			
Thomas J. Casey	Chief Engineer	65	449 Cambridge Street.
Call Force.			
Nathaniel W. Bunker	District Chief Engineer.	55	97 Pemberton Street.
William B. Cade	" " "	64	27 Park Street.
Permanent Force.			
Dennis R. Sullivan	Chief's Driver	27	35 Harvard Street.

Engine Company No. 1.

House, Brattle Square.

No. of Badge.	Name.	Rank.	Age.	Residence.
	Permanent Force.			
1	Edward E. Priest	Engineman	62	96 Winthrop Street.
31	Daniel E. Powers	Assistant Engineman	39	37 Ash Street.
2	Hiram W. Hooker	Driver	59	Engine House.
28	Daniel E. Shea	Driver	41	54 Banks Street.
	Call Force.			
27	John L. Jones, Jr.	Captain	47	209 Green Street.
29	Thomas H. Kneeland	Lieutenant	34	17 Eliot Street.
25	James Jefferson	Hoseman	44	9 Eliot Street.
23	J. Joseph Corcoran	"	38	34 Ash Street.
26	Walter E. Chapman	"	31	27 Athens Place.
74	James W. Irwin	"	43	5 Story Street.
30	John J. Foley	"	36	1 Hancock Street.
65	Timothy Curran	"	29	36 Hunting Street.

Engine Company No. 2.

House, Massachusetts Avenue.

No. of Badge.	Name.	Rank.	Age.	Residence.
	Permanent Force.			
41	William H. Cairns	Engineman	35	103 School Street.
80	John H McDermott	Assistant Engineman	47	11 Dodge Street.
114	Angus H. McDonald	Driver	28	106 Washington Street.
6	Albert F. Sawyer	Driver	55	18 Brookline Street.
	Call Force.			
32	James Cunningham	Captain	56	25 State Street.
33	Arthur C. Day	Lieutenant	62	47 Austin Street.
35	Benjamin D. Foss	Hoseman	62	78 Elm Street.
37	John Haley	"	44	344 Massachusetts Avenue.
88	Charles H. Cutting	"	46	6 Harold Place.
40	George F. Donovan	"	29	54 Sidney Street.
107	William H. Hanson	"	31	73 Hampshire Street.
119	Robert J. Ballantine	"	37	402 Putnam Avenue.

Engine Company No. 3.

House, Third Street.

No. of Badge.	Name.	Rank.	Age.	Residence.
	Permanent Force.			
7	Hiram Blood	Engineman	67	40 Fifth Street.
62	Charles A. Blair	Assistant Engineman	37	22 Springfield Street.
8	Peter F. McSorley	Driver	39	33 Fourth Street.
49	Patrick J. Hayes	Driver	36	92 Gore Street.
	Call Force.			
42	Walter Baker	Captain	45	91 Gore Street.
48	John F. Brassel	Lieutenant	44	3 Marney Street.
45	Eliot E. Alley	Hoseman	62	73 Thorndike Street.
46	Timothy J. Mahoney	"	51	346 Vine Street.
115	Frank McGrath	"	34	168 Willow Street.
112	Charles H. Leddy	"	38	89 Gore Street.
15	William F. Newman	"	28	4 Hunting Street.

Engine Company No. 4.

House, Massachusetts Avenue.

No of Badge.	Name.	Rank.	Age.	Residence.
	Permanent Force.			
10	John E. Ricker	Engineman	54	2039 Massachusetts Ave.
55	Jeremiah O'Connor	Assistant Engineman	40	2 Olive Place.
19	Albert S. Benson	Driver	56	52 Boylston Street.
11	George E. Muzzey	Driver	57	5 Blake Street.
	Call Force.			
51	Daniel A. McCaughin	Captain	41	Rear 5 Russell Street.
57	John T. Henderson	Lieutenant	29	128 Reed Street.
56	Josiah P. Parsons	Hoseman	52	17 Regent Street.
54	George F. Durgan	"	30	12 Regent Street.
53	Redmond M. Burke	"	29	Rear 5 Russell Street.
52	Joseph T. Vocell	"	33	12 Bolton Street.
105	William F. Henderson	"	34	74 Rice Street.
50	George L. Vocell	"	29	23 Bolton Street.

Engine Company No. 5.

House, Inman Square.

No. of Badge.	Name.	Rank.	Age.	Residence.
	Permanent Force.			
13	Charles E. Conner	Engineman	47	1337 Cambridge Street.
9	Lorenzo H Dale	Assistant Engineman	55	104 Otis Street.
3	Charles R. Hooker	Driver	54	1411 Cambridge Street.
68	James H. Furfey	Driver	41	59 Prince Street.
	Call Force.			
59	Francis P. Scanlan	Captain	52	1343 Cambridge Street.
64	William T. King	Lieutenant	42	100½ Hampshire St.
61	George W. McIntire	Hoseman	44	70 Inman Street.
67	George P. Bannister	"	38	80 Green Street.
66	James H. McGrath	"	42	1072 Cambridge St.
60	George W. Stevens	"	32	1307 Cambridge Street.
104	Charles Barney	"	36	1307 Cambridge Street.
63	George W. Montgomery.	"	38	40½ Baldwin Street.

Engine Company No. 6.

House, River Street.

No. of Badge.	Name.	Rank.	Age.	Residence.
	Permanent Force.			
98	J. Lewis Howe	Engineman	45	184 River Street.
87	Charles A. Cairns	Assistant Engineman	32	152 River Street.
127	John J. O'Callahan	Driver	29	136½ Green Street.
34	William Parks	Driver	54	208 River Street.
	Call Force.			
24	John H. Brown.	Captain	47	206 River Street.
101	John H. Robbins	Lieutenant	43	34 Pearl Street.
100	John E. Savage	Hoseman	44	31 Kinnaird Street.
102	Melvin A. Priest	"	41	16 Fairmont Street.
73	Charles H. Waite	"	52	95 Pine Street.
106	James P. Welch	"	35	38 State Street.
103	Thomas F. Mullins	"	25	308 Western Avenue.
123	Louis Clauss	"	30	72 Allston Street.

Engine Company No. 7.

House, Main Street.

No. of Badge.	Name.	Rank.	Age.	Residence.
	Permanent Force.			
4	Thomas Wiseman	Engineman	54	804 Main Street.
5	John H. Walker	Assistant Engineman	69	3 Williams St.
85	Thomas F. O'Connell	Driver	37	81 Sixth Street.
36	John McCarthy	Driver	45	34 Mt. Auburn Street.
	Call Force.			
93	George A. Garrity	Captain	37	5 Pioneer Street.
124	Joseph A. Wood	Lieutenant	36	81 Hampshire Street.
109	James E. Bligh	Hoseman	27	142 Willow Street.
108	Thomas A. Montgomery	"	34	5 Portsmouth Street.
125	Edward Clark	"	30	234 Winsor Street.
86	James H. Skehan	"	29	4 Washington Street.
96	Louis J. Anshelm	"	38	41 Portland Street.
110	James P. O'Neil	"	31	51 Bristol Street.

Chemical Engine Company No. 1.

House, Western Avenue.

No. of Badge.	Name.	Rank.	Age.	Residence.
	Permanent Force.			
17	Lewis C. Clark	Lieutenant	53	48 Western Avenue.
82	James T. McCabe	Engineman	35	39 Green Street.
99	John H. Dardis	Driver	28	27 Park Street.

Chemical Engine Company No. 2.

House, Lexington Avenue.

No. of Badge.	Name.	Rank.	Age.	Residence.
	Permanent Force.			
94	George W. Butler	Lieutenant	56	171 Lake View Avenue.
58	William H. Barrow	Engineman	29	182 Lake View Avenue.
18	William Haley	Driver	52	133 Lexington Avenue.

Ladder Company No. 1.

House, Eliot Square.

No. of Badge.	Name.	Rank.	Age.	Residence.
	Permanent Force.			
22	John T. McNamee	Captain	43	94 Winthrop Street.
117	Edward F. Conroy	Lieutenant	27	259 Mt. Auburn Street.
122	Arthur G. McArthur	Ladderman	26	53 Magee Street.
77	Benjamin McArthur	"	25	166 Putnam Avenue.
75	Charles A. Olsen	Driver	31	10 Mt. Auburn Street.
	Call Force.			
79	Edward P. Donahue	Ladderman	41	1 Willard Street Court.
72	Joseph E. Burke	"	36	70 Plympton Street.
71	Willard H. Poole	"	39	150 River Street.
14	William H. Buchanan	"	30	274 Mt. Auburn Street.
121	John D. Shea	"	27	5 Dyke Street.
92	Robert J. Buchanan	"	27	20 Grigg Street.
70	John W. Jefferson	"	33	9 Gerry Street.

Ladder Company No. 2.

House, Portland Street.

No. of Badge.	Name.	Rank.	Age.	Residence.
	Permanent Force.			
43	William F. Newman	Captain	53	66 Winter Street.
83	James M. Casey	Lieutenant	34	775 Cambridge Street.
38	Albert R. Wait	Ladderman	26	934 Cambridge Street.
20	Thomas Mimnaugh	Driver	45	35 Warren Street.
	Call Force.			
81	James F. Dalton	Ladderman	59	17 Squires Court.
90	Albert Smith	"	44	167 Cherry Street.
95	Louis J. Stanger	"	44	275 Vine Street.
89	John J. Balfe	"	27	58 Porter Street.
111	Jeremiah F. Hayes	"	32	106 Spring Street.
97	Matthew L. Fairbairn	"	28	22 Palermo Street.
116	Thomas J. Lane	"	34	35 Warren Street.
113	William G. Johnson	"	37	14 Springfield Street.

Ladder Company No. 3.

House, Massachusetts Avenue.

No. of Badge.	Name.	Rank.	Age.	Residence.
	Permanent Force.			
21	Thomas L. Hunter	Captain	58	407 Massachusetts Avenue.
44	Cutler L. Vose	Lieutenant	30	1 Hancock Place.
47	Exurie J. Ouimette	Tillerman	35	456 Massachusetts Avenue.
118	William C. Richardson	Ladderman	30	48 Fairmont Street.
	Call Force.			
69	Charles Emerson	Ladderman	53	5 Kinnaird Street.
76	Charles A. Sharon	"	50	Rear 13 Pine Street.
91	Lincoln E. Wheeler	"	54	76 Elm Street.
84	William D. Donovan	"	25	54 Sidney Street.

FIRES AND ALARMS.

From December 1, 1897 to December 1, 1898.

DECEMBER.

Wednesday, Dec. 1, 2.14–2.16 A. M. Box 16.

No. 45 Harvard Street. Owned by A. W. Holton. Loss, $60. Insurance, $5,400. Occupied by Massachusetts Fan Company. No loss. Originated in second floor. Cause, sparks from a forge.

Friday, Dec. 3, 9.16 A. M. Box 41.

No. 17 Fairmont Street. Owned by A. P. Morse. Loss, $210. Insurance, $1,000. Occupied by F. J. Ormond as dwelling. Loss, $294. Insurance, $500. Originated in a clothes closet on second floor. Cause, child and matches.

Monday, Dec. 6, 5 P. M. Still.

No. 35 Brookline Street. Owned by Simeon Snow. Loss, $60. Insurance, $20,000. Occupied by E. A. Bailey as dwelling. Loss, $50. Insurance, $1,000. Cause, explosion of leaking gas.

Monday, Dec. 6, 8.55 P. M. Box 152.

No. 1168 Massachusetts Avenue. Owned by H. F. Bishop. Loss, $360. Insurance, $2,000. Occupied by Frederick Towers as dwelling. Loss, $560. Insurance, $1,485. Originated on second floor. Cause, explosion of a kerosene oil lamp.

Wednesday, Dec. 8, 7.27 P. M. Box 42.

No. 20 Blackstone Street. Owned by Houghton, Mifflin & Co. Loss, $352. Insurance $70,000. Occupied by Houghton, Mifflin & Co. as printers and publishers. Loss, $12,974. Insurance, $345,000. Originated under a work-bench on third floor. Cause, unknown.

Monday, Dec. 13, 9.40 P. M. Box 78.

No. 1 Holly Avenue. Owned by J. F. O'Brien. Loss, $1,500. Insurance $1,500. Occupied by J. F. O'Brien as store house. Loss, $600. No insurance.

Madison Street. Owned by J. F. O'Brien as dwelling. Loss, $564. Insurance, $1,000. Unoccupied.

Nos. 3–5 Holly Avenue. Owned by Leo Duffy. Loss, $1,100. Insurance, $2,500. Occupied by Leo Duffy as dwelling. Loss, $292. Insurance, $1,500. Occupied by A. E. McCarthy as dwelling. Loss, $170. Insurance, $600. Originated in storehouse. Cause, unknown.

Tuesday, Dec. 14, 11.30 P. M. Still.

Divinity Avenue. Owned and occupied by Harvard University as museum. No loss. Originated in oiled rags in model-room. Cause, spontaneous combustion.

Friday, December 17, 6.05 A. M. Still.

Cambridge Street. Owned by Middlesex County. New registry of deeds building. No loss. Originated in elevator well. Cause, sparks from hoisting engine.

Saturday, Dec. 18, 11.25 A. M. Still.

University Road. Owned and occupied by West End Street Railway Company as blacksmith shop. Loss, trifling. Originated on the roof. Cause, sparks from chimney.

Saturday, Dec. 18, 1.07 P. M. Box 49.

No. 1541 Cambridge Street. Owned by C. A. Dodge. Loss, $75. No insurance. Occupied by C. A. Dodge as tool-house. Loss, $175. No insurance. Cause, a pipe-smoker.

Saturday, Dec. 18, 1.20 P. M. Box 216.

No. 2 Baldwin Place. Occupied by F. R. Stoddard as dwelling. No loss. Cause, pan of fat on stove taking fire.

Thursday, Dec. 23, 12.50 P. M. Still.

Boylston Street. Owned by West End Railway Company as shed. No loss. Cause, sparks setting fire to roof.

Thursday, Dec. 23, 7.29 P. M. Box 36.

No. 704 Massachusetts Avenue. Cause, light from a plumber's furnace. Mistaken for fire.

Friday, Dec. 24, 7.52 A. M. Box 75.

No. 281 Walden Street. Owned by M. W. Sands. Loss, $4,669. Insurance, $7,500. Occupied by M. W. Sands as brick manufactory. Loss, $7,147. Insurance, $7,500. Cause, overheated dryers.

Tuesday, Dec. 28, 6.29 P. M. Box 61.

No. 96 Mt. Auburn Street. Owned by P. J. Rowe. Loss, $425. Insurance, $8,000. Occupied by E. J. Mason as dwelling. Loss, $992. Insurance, $2,500. Originated on second floor. Cause, incendiary.

Tuesday, Dec. 28, 9.30 P. M. Box 26.

No. 20 Harrison Street. Owned by Anna J. Lovering. Loss, $383. Insurance, $4,000. Unoccupied dwelling. Cause, incendiary.

Tuesday, Dec. 28, 11.30 P. M. Still.

No. 66 Sherman Street. Owned by the D. W. DeRosay heirs. Loss, $25. Insurance, $1,500. Unoccupied dwelling. Originated in door-steps on outside of building. Cause, incendiary.

JANUARY.

Saturday, Jan. 1, 7.05 P. M. Still.

No. 24 Oak Street. Occupied by William Coyne as dwelling. Loss, slight. Cause, clothes dropping on hot stove.

Sunday, Jan. 2, 10.03 A. M. Box 32.

No. 1070 Cambridge Street. Owned by Thomas Devens. Loss, $53. Inaurance, $11,000. Occupied by Isabella Pickett as dwelling. Loss, $25. No insurance. Originated in a lounge on second floor. Cause, dropping of a lighted match.

Sunday, Jan. 2, 12.30 P. M. Still.

No. 23 Hawthorn Street. Owned by J. K. Paine. Loss, $90. Insurance, $7,000. Occupied by J. K. Paine as dwelling. Loss, $30. Insurance, $4,000. Cause, soot in chimney taking fire.

Monday, Jan. 3, 11 A. M. Still.

Beach Street. Owned and occupied by St. James Episcopal Church as Chapel. Loss, trifling. Originated on roof. Cause, sparks from chimney.

Monday, Jan. 3, 12.40 P. M. Still.

University Road. Owned and occupied by Boston Elevated Railway Company as shed. Loss, trifling. Originated on the roof. Cause, sparks from chimney.

Tuesday, Jan. 4. 7.45 P. M. Still.

No. 31 Hancock Street. Owned and occupied by W. P. Usher as dwelling. No loss on building or contents. Cause, explosion of kerosene oil lamp.

Wednesday, Jan. 5, 3.10 A. M. Still.

Parnell Street. Owned and occupied by D. W. Gavin as lunch wagon. Loss, slight. Cause, box too near stove taking fire.

Friday, Jan. 7, 6.10 P. M. Box 32.

No. 378 Norfolk Street. Occupied by James Reilly as dwelling. Loss, slight. Cause, falling of a lighted hanging lamp.

Thursday, Jan. 13, 7.55 P. M. Still.

No. 2070 Massachusetts Avenue. Owned by Daniel O'Connell. Loss, $20. Insurance, $2,000. Occupied by M. J. Fife as dwelling. Loss, $25. No insurance. Cause, falling of a lighted kerosene oil lamp.

Saturday, Jan. 15, 11.39 P. M. Box 126.

Boardman Street. Owned by Broadway Baptist Church Society. Loss, $225. Insurance, $20,000. Occupied by Broadway Baptist Church Society as church. Loss, $54. Insurance, $2,000. Originated on first floor in a room used for printing. Cause, portable gas lamp igniting woodwork.

Monday, Jan. 17, 2.10 P. M. Still.

No. 92 Fifth Street. Owned and occupied by Ellen Drummey as dwelling. Loss, slight. Cause, thawing out frozen water pipes.

Tuesday, Jan. 18, 7.35 P. M. Box 76.

No. 37 Lancaster Street. Owned and occupied by H. D. Yerxa as dwelling. No loss. Cause, soot in chimney afire.

Wednesday, Jan. 19, 7.55 P. M. Still.

No. 442 Cambridge Street. Occupied by M. C. Clark as dwelling. Loss, slight. Cause, oil in kerosene lamp taking fire.

Monday, Jan. 24, 8.43 P. M. Box 75.

No. 66 Sherman Street. Owned by D. Warren De Rosay. Loss, $1,500. Insurance, $9,000. Occupied by D. Warren De Rosay as brick manufactory. Loss, $4,779. Originated in the drying-room. Cause, incendiary.

Tuesday, Jan. 25, 12.27 P. M. Box 52.

No. 37 Putnam Avenue. Owned by L. F. Apthorp. Loss, $35. Insurance, $1,500. Occupied by E. J. Norris as dwelling. Loss, $60. Insurance, $1,000. Originated in bedroom on second floor. Cause, gas jet igniting curtain.

Monday, Jan. 31, 8.03 A. M. Box 431.

No. 182 Raymond Street. Owned by A. H. Hews. Occupied by E. C. Hartford as dwelling. Loss, trifling. Originated in the cellar. Cause, thawing out water pipe.

Monday, Jan. 31, 11.17 A. M. Box 59.

No. 1324 Massachusetts Avenue. Owned by Porcellian Club. Loss, $350. Insurance, $30,000. Occupied by Porcellian Club as club room. Loss, slight. Cause, supposed by a lighted cigar stub.

FEBRUARY.

Thursday, Feb. 3, 12.54 A. M. Box 26.

No. 79 State Street. Owned by C. E. Smart. Loss, $2,050. Insurance, $1,000. Occupied by D. Mayhew & Son as casket manufactory. Loss, $1,200. No insurance. Occupied by estate of J. J. Fay as furniture manufactory. Loss, $1,500. Insurance, $1,500. Occupied by C. A. Houghton as piano key manufactory. Loss, $150. Insurance, $200..

No. 81 State Street. Owned by Charles Van Buskirk & Co. Loss, $125. Insurance, $700. Occupied by D. E. Scranton & Co. as wood turners. Loss, $10. No insurance. Originated in second floor of Smart's building. Cause, friction of loose pulley in shafting.

Friday, Feb. 4, 11.15 A. M. Still.

No. 1417 Cambridge Street. Occupied by C. E. Crockett as dwelling. No loss. Cause, oil stove taking fire.

Saturday, Feb. 5, 8.30 P. M. Still.

Winsor Street. Owned by J. G. Poindexter as unfinished dwelling. No loss. Originated in the cellar amongst shavings and rubbish. Cause, unknown.

Sunday, Feb. 6, 3.47–3.56 A. M. Box 15.

Bent Street. Owned by Tobias Libby & Co. Loss, $984. Insurance, $2,500. Occupied by Tobias Libby & Co. as stable. Loss, $900. No insurance. Occupied by W. F. Cobb as stable. Loss, $1,909. Insurance, $3,000. Occupied by John Lutez as stable. Loss, $1,309. Insurance, $1,500. Originated on first floor under the stairs leading to hay loft. Cause, unknown.

Monday, Feb. 7, 12.53 P. M. Box 59.

No. 25 Holyoke Street. Owned by G. C. Buckland. Loss, $200. Insurance, $8,500. Occupied by G. C. Buckland as dwelling. Loss, trifling. Originated in the cellar in old stuffed furniture. Cause, the careless dropping of a lighted match.

Friday, Feb. 11, 7.22 P. M. Box 15.

No. 87 Bent Street. Owned by S. S. Hamill. Loss, $80. Insurance, $1,500. Occupied by S. S. Hamill as organ manufactory. Loss, $412. Insurance, $2,250. Originated on second floor. Cause, thought to be of incendiary origin.

Friday, Feb. 11, 9.10 P. M. Box 153.

No. 110 Plympton Street. Owned by Simon Alexander. Loss, $30. Insurance, $1,500. Occupied by A. L. Rasmussen as dwelling. Loss, $25. No insurance. Originated in a clothes-room. Cause, clothes ignited by lighted lamp.

Saturday, Feb. 12, 7.27 P. M. Box 9.

No. 139 Bridge Street. Occupied by several families as dwellings. No loss. Cause, throwing of a lighted lamp.

Sunday, Feb. 13, 1.02 A. M. Box 25.

No. 433 Massachusetts Avenue. Owned by estate of B. P. Clark. Loss, $85. Insurance, $4,000. Occupied by C. B. Wilber as dry goods. Loss, $850. Insurance, $850. Cause, explosion of kerosene oil lamp.

Friday, Feb. 18, 8.29 A. M. Box 43.

No. 14 Hayes Street. Owned by Daniel McNamara. Loss, $27. Insurance, $1,500. Occupied as dwelling. Cause, child playing with fire.

Friday, Feb. 18, 6.56 P. M. Box 35.

No. 22 Worcester Street. Owned by Jacob Fox. Loss, $150. Insurance, $3,500. Occupied by Jacob Fox as dwelling. Loss, $350. Insurance, $1,400. Occupied by Charles Lydenburg as dwelling. Loss, $150. No insurance. Cause, unknown.

Friday, Feb. 18, 11.33 P. M. Box 25.

Nos. 26-28 State Street. Owned by Mt. Olive Baptist Church Society. Loss, $250. Insurance, $3,000. Occupied by W. F. Murray & Co. as shirt manufactory. Loss, $432. Insurance, $2,700. Occupied by Marsh Bros., Pierce & Co. as shirting. Loss, $4,000. Insurance, $6,500. Originated in basement. Cause, incendiary.

Saturday, Feb. 19, 2 A. M. Still.

No. 74 Thorndike Street. Owned by E. J. Nolan. Loss, $50. Insurance, $2,000. Occupied by R. S. McKay as dwelling. No loss. Originated on first floor. Cause, defective furnace pipes.

Saturday, Feb. 19, 8.42 P. M. Box 134.

No. 253 Norfolk Street. Owned by Russell & Co. Loss, $1,450. Insurance, $9,000. Occupied by Russell & Co. as confectioners. Loss, $4,774. Insurance, $14,200. Originated in the basement. Cause, unknown.

Sunday, Feb. 20, 5.19 P. M. Box 41.

No. 50 Prince Street. Owned by J. G. Smith. Loss, $53. Insurance, $1,500. Occupied by Isabel Maxwell as dwelling. Loss, trifling. Originated in the kitchen on first floor. Cause, unknown.

Monday, Feb. 21, 8.30 A. M. Still.

No. 23 State Street. Occupied by J. K. Fogwill as dwelling. Loss, trifling. Originated in a lounge. Cause, child and matches.

Tuesday, Feb. 22, 3.33 P. M. Box 429.

No. 62 Hampshire Street. Owned and occupied by H. F. Sparrow & Co. as confectioners. Cause, accidental automatic alarm.

Saturday, Feb. 26, 6.04 P. M. Box 52.

No. 12 Ellery Street. Owned and occupied by J. H. Barbour as dwelling. Loss, trifling. Originated in dining-room on first floor. Cause, gas jet igniting curtain.

Monday, Feb. 28, 2.10-2.14 P. M. Box 59.

No. 1308 to 1316 Massachusetts Avenue. Owned by J. M. Hilton. Loss, $11,219. Insurance, $17,000. Occupied by several parties as dormitories. Loss, $2,500. No insurance. No. 1308. Occupied by R. R. Andrews as dentist. Loss, $656. Insurance, $1,000. No. 1310. Occupied by Oak Grove Creamery Company. Loss, trifling. No. 1312. Occupied by J. W. Brine as gent's furnishings. Loss, $417. Insurance, $1,000. Nos. 1314-1316. Occupied by Leavitt & Pierce as billiard-room. Loss, $1,700. Insurance, $3,000. Originated in a closet in the hall of third floor. Cause, unknown.

MARCH.

Thursday, March 3, 6.10 P. M. Still.

Third Street. Owned and occupied by W. H. Measures as lunch wagon. Loss, trifling. Cause, oil stove taking fire.

Sunday, March 6, 10.15 P. M. Box 271.

No. 15 Rice Street. Cause, smoke mistaken for fire.

Monday, March 7, 7.45 P. M. Still.

No. 231 Bridge Street. Occupied by J. M. Wood as office. No loss. Cause, overheated stove.

Thursday, March 10, 8.49 A. M. Box 429.

No. 62 Hampshire Street. Occupied by H. F. Sparrow & Co., confectioners. Cause, accidental automatic alarm.

Saturday, March 12, 3.18 P. M. Box 72.

No. 187 Sherman Street. Owned by Jeremiah Murphy. Loss, $175. Insurance, $400. Occupied by E. M. Harrington *et al.*, as stable. Loss $35. No insurance. Originated in hayloft. Cause, children and matches.

Saturday, March 12, 5.35 P. M. Still.

No. 163 Bridge Street. Occupied by J. N. Mickle as dwelling. Loss, trifling. Originated in a closet. Cause, child and matches.

Tuesday, March 15, 12.14 A. M. Box 42.

No. 552 Putnam Avenue. Occupied by W. L. Sprague as dwelling. No loss. Cause, kettle of fat on stove taking fire.

Tuesday, March 15, 2.10 P. M. Still.

No. 89 Spring Street. Occupied by Fred Seils as dwelling. No loss. Cause, soot in chimney afire.

Thursday, March 17, 11.45 A. M. Still.

No. 152 Vassal Lane. Owned by Jonn McHugh as dwelling. No loss. Cause, sot in chimney afire.

Thursday, March 17, 6.25 P. M. Box 56.

Divinity Avenue. Cause, grass burning.

Saturday, March 19, 5.21 A. M. Box 416.

Binney Street. Owned by Boston & Albany Railroad Company as gate-tender's shanty. Loss trifling. Cause, overheated stove.

Saturday, March 19, 10.32 P. M. Box 136.

No. 51 Norfolk Street. Owned by L. B. Porter. Loss, $40. Insurance, $12,500. Occupied by Louisa Barrier as dwelling. Loss, $25. Insurance, $1,000. Originated on third floor. Cause, upsetting of kerosene oil lamp.

Sunday, March 20, 4.30 A. M. Still.

No. 207 Cambridge Street. Occupied by S. H. Mitchell as bakery. Loss trifling. Originated on second floor. Cause, overheated oven.

Sunday, March 20, 5.14 P. M. Box 43.

No. 14 Hayes Street. Occupied as dwelling. Cause, smoke mistaken for fire.

Monday, March 21, 2.15 P. M. Still.

Nos. 39–41 Harvard Street. Occupied by C. T. Duff as spring-maker. Loss, trifling. Originated on the roof. Cause, sparks from chimney.

Sunday, March 27, 10.50 A. M. Still.

No. 6 Garden Street. Occupied by C. S. Gage as dwelling. No loss. Cause, hot ashes in barrel.

APRIL.

Saturday, April 2, 9.45 A. M. Still.

No. 56 Columbia Street. Occupied by G. W. Lewis as dwelling. Loss, slight. Originated in the cellar-way. Cause, lighted pipe in coat pocket.

Saturday, April 2, 6.21 P. M. Box 31.

No. 22 Porter Street. Owned by Mary Reardan as dwelling. No loss. Cause, soot in chimney afire.

Monday, April 4, 6.15 P. M. Box 24.

No. 167 Brookline Street. Owned by Patrick Glennan as haystack. Loss, trifling. Cause, set afire by children.

Friday, April 8, 1.30 P. M. Still.

No. 209 Bridge Street. Occupied by W. L. Lockhart & Co. as casket manufactory. Loss, slight. Originated in shavings in boiler-room. Cause, sparks from furnace.

Friday, April 8, 1.45 P. M. Box 41.

No. 51 Fairmont Street. Owned by M. E. Chandler. Loss, $200. Insurance, $2,000. Occupied by M. E. Chandler as dwelling. Loss, $65. Insurance, $1,000. Originated on first floor in the ell. Cause, kerosene oil stove taking fire.

Tuesday, April 12, 3.50 P. M. Box 428.

No. 29 Hampshire Street. Owned and occupied by Boston Woven Hose and Rubber Company. Made no claim as to loss. Cause, explosion of naphtha gas.

Wednesday, April 13, 3.01 A. M. Box 87.

No. 341 Concord Avenue. Owned by Ann McBride. Loss, $45. Insurance, $1,000. Occupied by Ann McBride as dwelling. Loss, $20. No Insurance. Cause, clothes falling on hot stove.

Wednesday, April 13, 3.49 A. M. Box 87.

No. 341 Concord Avenue. Cause, rekindling of fire. Alarm needless.

Wednesday, April 13, 12.35 P. M. Box 78.

No. 71 Concord Avenue. Owned by McAvoy estate. Loss, $90. Insurance, $2,500. Occupied by Annie McDonough as dwelling. No loss. Originated in the roof. Cause, sparks from plumber's furnace.

Friday, April 15, 9.56 A. M. Box 52.

No. 29 Banks Street. Owned by Ellen Murphy. Loss, $55. Insurance, $1,000. Occupied by Major Scott as dwelling. Loss, trifling. Cause, unknown.

Sunday, April 17, 10.16 P. M. Box 68.

No. 1896 Massachusetts Avenue. Owned by H. C. Rand. Loss, $85. Insurance, $2,000. Occupied by D. W. Gage as plumber. Loss, $45. Insurance, $3,000. Originated in old boxes and barrels on outside of building. Cause, sparks from locomotive.

Monday, April 18, 7.35 P. M. Box 135.

No. 24 Inman Street. Owned by W. V. Thompson. Loss, $125. Insurance, $3,000. Occupied by W. V. Thompson as dwelling. Loss, $205. Insurance, $1,000. Cause, dropping of a lighted match into oil.

Thursday, April 21, 8.10 A. M. Still.

No. 17 Eliot Street. Owned by Buttrick estate. No loss. Occupied by L. L. Powers as storage for furniture. Loss, $35. No insurance. Cause, sparks from a pipe.

Thursday, April 21, 2.08 P. M. Box 26.

No. 161 Hastings Street. Occupied by A. B. McCarthy as dwelling. Loss, slight. Cause, clothes falling on hot stove.

Friday, April 22, 2.45 P. M. Still.

No. 78 Berkshire Street. Owned by M. H. Dewire. Loss, $50. Insurance, $3,000. Occupied by John Gaughan as dwelling. Loss, $60. Insurance, $1,000. Originated in a bedroom. Cause, stepping on and igniting matches in coat pocket.

Monday, April 25, 1.48 A. M. Box 43.

No. 90 DeWolf Street. Owned by E. T. Broderick. Loss, $100. Insurance, $2,300. Occupied by E. T. Broderick as groceries and provisions. Loss, $350. Insurance, $3,000. Originated in the cellar. Cause, unknown.

Friday, April 29, 10.55 P. M. Box 25.

No. 11 Norfolk Street. Owned by A. G. Powers. Loss, $440. Insurance, $4,000. Occupied by Samuel Boyer as dwelling. Loss, $180. Insurance, $1,000. Originated in a bedroom on third floor. Cause, upsetting of a lighted lamp.

MAY.

Sunday, May 1, 3.47 P. M. Box 21.

No. 9 Peters Street. Occupied by G. W. Seaward as dwelling. Loss, slight. Originated in a mattress. Cause, child and matches.

Sunday, May 1, 8.38 P. M. Box 43.

No. 27 Surrey Street. Occupied by Margaret Corcoran as dwelling. Loss, slight. Originated in a tablecloth. Cause, child and matches.

Thursday, May 5, 10.13 A. M. Box 429.

No. 62 Hampshire Street. Occupied by H. F. Sparrow & Co. as confectioners. Cause, accidental automatic alarm.

Sunday, May 8, 12.36 A. M. Box 115.

Rear First Street. Owned by J. T. Scully as dwelling house. Loss, $1,200. Insurance, $1,200. This building was being moved from Third Street to First Street. Cause, incendiary.

Tuesday, May 10, 5.58 P. M. Box 87.

No. 152 Vassal Lane. Occupied by John McHugh as dwelling. No loss. Cause, soot in chimney afire.

Wednesday May 11, 12.20 A. M. Box 36.

No. 25 Central Square. Owned by G. R. Southwick. Loss, $65. Insurance, $2,500. That portion of the building where the fire started was unoccupied. Cause, unknown.

Thursday, May 12, 6 P. M. Still.

No. 83 Broadway. Owned by Coleman Brothers as dwelling. Loss, $15. Insurance, $1,500. Originated on the roof. Cause, sparks from chimney.

Wednesday, May 18, 1.49 P. M. Box 17.

No. 93 Hastings Street. Owned by Joseph Hall. Loss, $25. Insurance, $1,000. Occupied by Robert Stone as dwelling. Loss, $15. No insurance. Originated in paper on a table. Cause, child and matches.

Thursday, May 19, 9.05 A. M. Still.

No. 187 Hampshire Street. Occupied by W. O. Dorr as hencoop. Loss, slight. Cause, oil in kerosene lamp taking fire.

Thursday, May 19, 11.15 P. M. Box 26.

No. 6 Portland Street. Owned by Standard Brass Company. Loss, $50. Insurance, $750. Occupied by Standard Brass Company as foundry. Loss, $20. Insurance, $1,200. Cause, hot poker placed against side of building.

Monday, May 23, 3.55 P. M. Still.

Bridge Street. Owned by P. O'Reardon as dump cart filled with rubbish. Cause, fire from a pipe.

Wednesday, May 25, 3.50 A. M. Box 27.

No. 81 Moore Street. Owned by Honora Nolan. Loss, $50. Insurance, $500. Occupied by Thomas Mahar as stable. Loss, trifling. Originated in old horse blankets. Cause, supposed from pipe smoking.

Wednesday, May 25, 10.14 P. M. Box 414.

No. 170 Thorndike Street. Occupied by J. H. Wegeler as dwelling. No loss. Originated in the cellar. Cause, hot ashes in barrel.

Saturday, May 28, 10.34 P. M. Box 14.

No. 200 Otis Street. Owned by E. H. Flentje. Loss, $145. Insurance, $4,500. Occupied by Wright & Lovering as chair manufactory. Loss, $50. Insurance, $4,500. Originated in dust around an electric motor.

Tuesday, May 31, 8.38 P. M. Box 149.

No. 17 Myrtle Street. Owned by Lilian Davis. Loss, $8. Insurance, $2,000. Occupied by A. H. McAuley as dwelling. Loss, $50. Insurance, $1,000. Originated in a bedroom. Cause, explosion of a kerosene oil lamp.

JUNE.

Thursday, June 2, 7.38 P. M. Box 36.

No. 697 Massachusetts Avenue. Owned by Union Hall association. Loss, slight. Occupied by G. W. Douglass as apothecary. Loss, $109. Insurance, $2,000. Originated in rear room. Cause, a lighted lamp setting shelf afire.

Monday, June 6, 3.49 A. M. Box 114.

No. 135 Gore Street. Owned by F. S. Adams. Loss, $135. Insurance, $200. Occupied by B. F. Comee as bakery. Loss, $125. No insurance. No. 137 Gore Street. Owned by C. W. H. Moulton. Loss, $80. Insurance, $500. Occupied by Nels Greberg as dwelling. No loss. Rear No. 137. Owned and occupied by C. W. H. Moulton & Co. as shed. Loss, $120. No insurance. Originated in bakery. Cause, supposed of incendiary origin.

Monday, June 6, 7.51 P. M. Box 64.

No. 45 Garden Street. Occupied by C. C. Livermore as dwelling. No loss. Cause, soot in chimney afire.

Wednesday, June 8, 8.34 A. M. Box 137.

No. 282 Western Avenue. Owned by S. A. Dyme. Loss, $240. Insurance, $3,500. Occupied by George Dorkins as dwelling. Loss, $20. No insurance. Cause, gasolene stove taking fire.

Thursday, June 9, 2.25 P. M. Still.

Otis Street. Irving & Cassin furniture manufactory. Cause, accidental automatic alarm.

Saturday, June 11, 12.50 P. M. Still.

No. 243 Hampshire Street. Owned by Hamilton & Lemay as awning manufacturers. Cause, firecrackers.

Saturday, June 11, 1.56 P. M. Box 69.

No. 4 Day Street. Owned by E. O. Glidden as unoccupied stable. Loss. $400. Insurance, $500. Originated in hayloft. Cause, children and matches,

Wednesday, June 15, 2.16 A. M. Box 32.

No. 406 Norfolk Street. Owned by Patrick Hagerty. Loss, $555. Insurance, $1,500. Occupied by Patrick Hagerty *et als.*, as dwellings. Loss, $100. No insurance. Originated in cellar. Cause, unknown.

Friday, June 17, 12.20 A. M. Box 29.

Webster Avenue. False alarm. The box was broken open and the alarm given by some malicious person.

Friday, June 17, 3.30 P. M. Still.

Winsor Street. Rubbish on dump burning.

Friday, June 17, 3.40 P. M. Still.

No. 619 Massachusetts Avenue. Awning burning. Cause, firecrackers.

Friday, June 17, 5.02 P. M. Box 29.

No. 21 Vandine Street. Owned by J. W. Hammond. Loss, $25. Insurance, $750. Occupied by Patrick Finley *et als.*, as stable. No loss. Originated on outside of building. Cause, firecrackers.

Friday, June 17, 11.25 P. M. Still.

No. 7 Boylston Street. Occupied by University Art Studio. Cause, smoke mistaken for fire.

Sunday, June 19, 3.21 A. M. Box 28.

No. 171 Broadway. Owned by Heirs of L. Merritt. Loss, $175. Insurance, $2,000. Occupied by M. E. Nelson as boarding house. Loss, $30. Insurance, $1,000. Originated in a closet. Cause, unknown.

Monday, June 20, 9 A. M. Still.

No. 20 Thorndike Street. H. M. Sawyer & Son's oil cloth manufactory. Cause, accidental automatic alarm.

Tuesday, June 21, 11.02 P. M. Box 271.

No. 57 Rice Street. Owned by E. K. Hall. Loss, $. Insurance, $. Occupied by Thomas Paul as dwelling. Loss, $74. Insurance, $1,000. Originated in a bedroom on third floor. Cause, upsetting of oil lamp.

Wednesday, June 22, 1.08 P. M. Box 39.

No. 31 Tufts Street. Occupied by F. D. Field as dwelling. No loss. Cause, oil stove afire.

Friday, June 24, 9.46 A. M. Box 81.

No. 3 Gibson Street. Owned by A. E. Scorgie. Loss, $230. Insurance, $2,200. Occupied by A. E. Scorgie as dwelling. Loss, $50. Insurance, $700. Originated in the attic. Cause, supposed to be mice and matches.

Sunday, June 26, 9.27 A. M. Still.

No. 105 Winter Street. Occupied by David Clancy as dwelling. No loss. Cause, soot in chimney afire.

Monday, June 27, 9.54 A. M. Box 31.

No. 803 Cambridge Street. Owned by James Coyle. Loss, $100. Insurance, $4,000. Occupied by Patrick Kelleher as dwelling. Loss, $75. No insurance. Cause, supposed to be rats and matches.

Tuesday, June 28, 12.50 P. M. Still.

No. 241 River Street. Owned by heirs of W. A. Ward. Loss, $20. Insurance, $12,000. Occupied by J. W. Young as dwelling. Loss, $20. No insurance. Cause, burning sulphur to purify room.

Tuesday, June 28, 9.27 P. M. Box 61.

No. 36 Brattle Street. Owned by David Brewer. Loss, slight. Occupied by A. M. Davidson as hotel. Loss, $25. Insurance, $2,000. Originated in an old sofa in the cellar. Cause, supposed to be rats and matches.

Wednesday, June 29, 9.30 P. M. Still.

Albany Street. Owned by Charles River Park Association as fence. Loss, slight. Originated in rubbish on dump.

Thursday, June 30, 1.25 P. M. Still.

No. 141 Austin Street. Cause, burning grass.

Thursday, June 30, 6.15 P. M. Still.

No. 42 Gore Street. Occupied by William McMackin as dwelling. No loss. Cause, oil in kerosene stove taking fire.

JULY.

Friday, July 1, 11.35 A. M. Box 78.

No. 2 Garden Court. Owned by J. W. Finnick. Loss, $40. Insurance, $2,000. Occupied by several parties as dwellings. No loss. Originated in window-casing on third floor. Cause, a lighted slow-match placed on window-sill.

Saturday, July 2, 6.55 P. M. Still.

No. 2 Cherry Street. Occupied by Edward Harris as dwelling. Loss, slight. Cause, explosion of kerosene oil lamp.

Saturday, July 2, 10.30 P. M. Still.

No. 163 Bridge Street. Occupied by Mickle Brothers as stable. No loss. Originated in hayloft. Cause, firecrackers.

Sunday, July 3, 8.30 P. M. Still.

No. 1 Pelham Street. Owned by M. L. Feeney as dwelling. Loss, trifling. Originated on the roof. Cause, firecrackers.

Monday, July 4, 12.39 A. M. Box 32.

No. 1109 Cambridge Street. Owned by David O'Mara. Loss, $25. Insurance, $2,000. Occupied by David O'Mara as dwelling and tailor shop. Loss, $68. Insurance, $3,700. Originated in the attic. Cause, firecrackers dropping through open skylight.

Monday, July 4, 3.45 A. M. Still.

No. 402 Massachusetts Avenue. Occupied by Ching Ling as laundry. Loss, slight. Originated on outside of building. Cause, firecrackers.

Monday, July 4, 7.57 A. M. Box 42.

No. 375 Western Avenue. Owned by heirs of L. Marrett. Loss, $30. Insurance, $1,500. Occupied by J. E. Morse as dwelling. Loss, $90. Insurance, $500. Originated in a bedroom on third floor. Cause, firecrackers thrown into window.

Monday, July 4, 9.56 A. M. Box 41.

No. 12 Rockwell Street. Owned by W. F. Carter as dwelling. Loss, $12. Insurance, $2,000. Originated on the roof. Cause, firecrackers.

Monday, July 4, 1.57 P. M. Box 153.

No. 24 Grant Street. Owned by Peter Burns as dwelling. Loss, $23. Insurance, $1,000. Originated on the roof. Cause, firecrackers.

Wednesday, July 6, 1.49 A. M. Box 16.

Deacon Street. Owned by E. A. Dow. Loss, $700. Insurance, $1,100. Occupied by F. E. Hall as carpet cleanser. Loss, $12,000. Insurance, $1,500. Cause, unknown.

Wednesday, July 6, 10.38 A. M. Box 152.

No. 7 Bow Street. Owned by Robert Torrey. Loss, $274. Insurance, $2,000. Occupied by J. S. Brown as clothes cleaner. Loss, $200. No insurance. Cause, ignition of naphtha.

Wednesday, July 6, 3.05 P. M. Box 59.

Dunster Street. Owned by John Little estate. Loss, $300. Insurance, $10,000. Occupied by R. M. Roloson *et als.*, as dormitory. Loss, $150. Insurance, $200. Cause, drapery ignited by stepping on parlor matches.

Wednesday, July 6, 10.02 P. M. Box 149.

No. 19 Myrtle Avenue. Owned by Caroline Wieland. Loss, $740. Insurance, $2,000. Occupied by Caroline Wieland as dwelling. Loss, $119. Insurance, $600. Occupied by William Rausch as dwelling. Loss, $392. Insurance, $500. Originated on first floor. Cause, supposed by the explosion of kerosene oil lamp.

Thursday, July 7, 3.13 A. M. Box 412.

Second Street. Cause, burning rubbish in yard of American Net and Twine Works.

Thursday, July 7, 2.11 P. M. Still.

University Road. Owned by Boston Elevated Railroad Company as shed. Loss, slight. Originated on the roof. Cause, sparks from chimney.

Friday, July 8, 5.41 P. M. Box 14.

No. 408 Cambridge Street. Owned E. H. Blake. Loss, $20. Insurance, $2,500. Occupied by F. H. Willard. Loss, $20. No insurance. Cause, oil in kerosene stove taking fire.

Saturday, July 9, 8.24 A. M. Box 9.

No. 24 Second Street. Owned by R. T. Robinson. Loss, $410. Insurance, $2,000. Occupied by J. L. Armstrong as dwelling. Loss, $600. Insurance, $1,500. Originated in a bedroom. Cause, child and matches.

Friday, July 15, 1.55 A. M. Box 41.

Nos. 12-12½ Magazine Court. Owned by I. B. Niscon as unoccupied dwelling. Loss, $1,224. Insurance, $2,500. Originated in a closet on second floor. Cause, incendiary.

Friday, July 15, 7.39 P. M. Box 418.

No. 145 Broadway. Owned and occupied by Sylvester Tower as piano action manufactory. Loss, $603. Insurance, $603. Originated in boiler-room. Cause, sparks from furnace.

Sunday, July 17, 5.36 P. M. Box 45.

No. 175 Franklin Street. Occupied by Christopher Keefe as dwelling. Loss, trifling. Cause, a lighted match carelessly thrown into open window.

Monday, July 18, 9.19 P. M. Box 36.

No. 674 Massachusetts Avenue. Owned by A. L. Dow *et al.* Loss, $707. Insurance, $20,000. Occupied by Burditt & Bynner as hardware, paints, etc.

Loss, $1,800. Insurance, $10,000. Originated in paint and oil room. Cause, spontaneous combustion.

Saturday, July 30, 1.52 P. M. Still.

First Street. Occupied by The J. H. Keenan Company as planing and moulding mill. Cause, accidental automatic alarm.

AUGUST.

Wednesday, Aug. 3, 7.30 P. M. Still.

No. 84 Tremont Street. Occupied by Patrick McKenna as dwelling. No loss. Cause, upsetting of a lighted kerosene oil lamp.

Friday, Aug. 5, 6.45 A. M. Still.

No. 538 Main Street. Occupied by Ivers & Pond as piano manufactory. Cause, accidental automatic alarm.

Friday, Aug. 5, 8.05 P. M. Box 134.

No. 94 Tremont Street. Owned and occupied by Bartholomew Kelleher as dwelling. Loss slight. Cause, child setting fire to curtain.

Sunday, Aug. 14, 1.24 P. M. Box 153.

No. 61 Plympton Street. Occupied by Patrick McCarthy as dwelling. Loss, slight. Originated in a closet amongst rags. Cause, unknown.

Tuesday, Aug. 16, 5.30 P. M. Still.

No. 66 Boylston Street. Owned by Margaret Hanlon as dwelling. Loss, trifling. Originated on the roof. Cause, sparks from chimney.

Tuesday, Aug. 16, 7.25 P. M. Still.

No. 112 Berkshire Street. Occupied by D. F. Hurley as dwelling. Loss, slight. Cause, oil in kerosene stove taking fire.

Saturday, Aug. 20, 3.30 P. M. Box 57.

No. 6 Sacramento Place. Occupied by A. F. Lyshon as dwelling. Loss, trifling. Originated in a mattress. Cause, child and matches.

Saturday, Aug. 20, 8.47 P. M. Still.

No. 61 Harris Street. Owned by William Saunders. Loss, $12. Insurance, $1,000. Occupied by B. A. McLaughlin as dwelling. Loss, slight. Cause, explosion of kerosene oil lamp.

Sunday, Aug. 21, 3.18 P. M. Box 14.

No. 488 Cambridge Street. Occupied by Elizabeth Baham as dwelling. No loss. Cause, oil stove taking fire.

Sunday, Aug. 21, 7.15 P. M. Still.

No. 229 River Street. Unoccupied stable. No loss. Cause, supposed to have been set fire by children.

Monday, Aug. 22, 7.40 P. M. Still.

No. 85 Winter Street. Occupied by Michael Shaughnessy as dwelling. Loss, slight. Cause, explosion of kerosene oil lamp.

Monday, Aug. 22, 10.51 P. M. Box 59.

No. 31 Boylston Street. Owned by Read heirs. Loss, $100. Insurance, $5,000. Occupied by H. B. Durant as tailor. Loss, $300. Insurance, $1,000. Originated under counter on second floor. Cause, unknown.

Tuesday, Aug. 23, 2.40 P. M. Still.

No. 54 Berkshire street. Occupied by Frank Randow as dwelling. No loss. Cause, oil stove taking fire.

Wednesday, Aug. 24, 3.30 A. M. Still.

No. 44 Pearl Street. Owned by Brewster estate. Loss, $60. Insurance, $3,500. Occupied by D. D. Bemis as boarding house. Loss, slight. Originated in bath-room on second floor. Cause, explosion of oil lamp.

SEPTEMBER.

Thursday, Sept. 1, 1.55 P. M. Still.

No. 81 Boylston Street. Occupied by Mrs. Daniel Sullivan as dwelling. Loss, trifling. Originated in bedclothes. Cause, child and matches.

Monday, Sept. 5, 9.40 A. M. Still.

No. 7 Mullins Court. Occupied by Frank Majewski as dwelling. No loss. Cause, oil stove taking fire.

Monday, Sept. 5, 1.30 P. M. Still.

No. 78 Cherry Street. Occupied by J. H. Steinmann as dwelling. No loss. Cause, fumigating room.

Thursday, Sept. 8, 8.05 P. M. Still.

No. 166 Hampshire Street. Occupied by J. A. Shanley as grocery. Loss, slight. Cause, lighted lamp igniting woodwork.

Monday, Sept. 12, 11.58 A. M. Still.

Brookline Street. Cause, rubbish on dump afire.

Tuesday, Sept. 13, 10.09 A. M. Box 31.

No. 795 Cambridge Street. Occupied by Thomas McGann as dwelling. Loss, slight. Originated in a closet on second floor. Cause, dropping of a lighted match.

Wednesday, Sept. 14, 5.45 P. M. Still.

No. 1348 Cambridge Street. Owned by Waite estate as stable. Loss, trifling. Cause, dropping of lighted matches on roof by boys.

Wednesday, Sept. 14, 5.45 P. M. Box 115.

No. 140 Third Street. Occupied by John Givney as dwelling. No loss. Cause, oil stove taking fire.

Monday, Sept. 19, 12.45 P. M. Still.

No. 538 Main Street. Occupied by Ivers & Pond as piano manufactory. Cause, accidental automatic alarm.

Monday, Sept. 19, 6.32 P. M. Box 423.

No. 50 Auburn Street. Occupied by American Electric Heating Company. Loss, trifling. Originated amongst rubbish on outside of building. Cause, hot ashes.

Thursday, Sept. 22, 4.50 A. M. Still.

No. 17 Orchard Street. Owned by H. N. Hill. Loss, $70. Insurance, $2,500. Occupied by H. A. Ricker as dwelling. Loss, $75. Insurance, $1,000. Originated in a closet. Cause, unknown.

Friday, Sept. 23, 7.40 P. M. Still.

No. 32 Highland Street. Occupied by L. L. Hubbard as dwelling. No loss. Originated in ash-pit in the cellar. Cause, hot ashes.

Saturday, Sept. 24, 9.26 P. M. Box 419.

No. 174 Broadway. Owned by Curtis Davis & Co. Loss, $239. Insurance, $9,000. Occupied by Wetmore & Pride Manufacturing Co. of desiccated cocoanut. Loss, $1,000. Insurance, $4,300. Originated under the floor of ell. Supposed cause, sparks from chimney.

Sunday, Sept. 25, 12.39 A. M. Box 14.

No. 426 Cambridge Street. Owned by F. L. Walklin. Loss, $90. Insurance, $1,800. Occupied by Jacob Jackson as boot and shoe store. Loss, $168. Insurance, $800. Cause, unknown.

Wednesday, Sept. 28, 2.15 P. M. Still.

No. 538 Main Street. Occupied by Ivers & Pond Piano Co. Cause, accidental automatic alarm.

OCTOBER.

Tuesday, Oct. 4, 4.57 P. M. Box 43.

No. 9½ Beaver Street. Owned by E. T. Broderick. Loss, $275. Insurance, $300. Occupied by E. T. Broderick as stable. Loss, $120. Insurance, $425. Originated in hayloft. Cause, set afire by boys.

Thursday, Oct. 6, 7.45 P. M. Box 115.

No. 213 Third Street. Occupied by Frank Keefe as barber. No loss. Cause, Keefe throwing a lighted oil lamp at a person.

Monday, Oct. 10, 12.50 P. M. Still.

No. 538 Main Street. Occupied by Ivers & Pond Piano Co. Cause, accidental automatic alarm.

Monday, Oct. 10, 4.30 P. M. Still.

No. 33B Harvard Street. Owned by Joseph Foristall. Loss, $30. Insurance, $2,500. Occupied by A. H. Blair as dwelling. No loss. Cause, oil stove taking fire.

Friday, Oct. 14, 3.37 P. M. Box 35.

No. 118 Elm Street. Owned by Louis Bromberg. Loss, $20. Insurance, $3,200. Occupied by Louis Bromberg as dwelling. No loss. Cause, overheated stove pipe igniting woodwork.

Saturday, Oct. 15, 4.25 P. M. Still.

No. 10 Green Street. Occupied by George Thompson as dwelling. Loss, trifling. Originated in a baby-carriage. Cause, child and matches.

Sunday, Oct. 16, 7.10 P. M. Box 53.

No. 2 Holyoke Place. Cause, sparks coming from chimney. Alarm needless.

Monday, Oct. 17, 11.49 A. M. Box 46.

No. 47 Hancock street. Owned by Patrick Butler. Loss, $10. Insurance, $2,000. Occupied by Catherine Lyons as dwelling. Loss, $40. No insurance. Originated in a closet. Cause, incendiary.

Friday, Oct. 21, 5.30 P. M. Box 52.

No. 8½ Mt. Auburn Street. Owned by T. N. Boyson estate as unoccupied stable. Loss, $60. Insurance, $500. Originated in hayloft. Cause, set afire by boys.

Sunday, Oct. 23, 6.25 P. M. Box 41.

No. 68 Pleasant Street. Owned by J. R. Bent. Loss, $78. Insurance, $3,000. Occupied by Florence Stetson as dwelling. Loss, $125. Insurance, $1,000. Originated in a clothes closet. Cause, child dropping a lighted match.

Monday, Oct. 24, 5.40 P. M. Box 32.

No. 288 Elm Street. Occupied by several families as dwellings. No loss. Cause, soot in chimney afire.

Wednesday, Oct. 26, 3.51 A. M. Box 26.

Albany Street. Owned by Geo. W. Gale Lumber Company. Loss, $2,524. Insurance, $2,524. Occupied by Geo. W. Gale Lumber Company as mill. Loss, $5,225. Insurance, $5,225. Originated on second floor. Cause, defect in fuel feeder-pipe to boiler.

Thursday, Oct. 27, 12.40 A. M. Box 34.

No. 279 Broadway. Owned by E. C. Huebel. Loss, $122. Insurance, $600. Occupied by E. B. Geldert as variety store. Loss, $287. Insurance, $500. Originated behind the counter in paper and other material. Cause, unknown.

Thursday, Oct. 27, 4.55 P. M. Box 32.

No. 1059 Cambridge Street. Owned by Dennison heirs. Loss, $98. Insurance, $3,000. Occupied by G. W. Loud as dwelling. No loss. Cause, dropping of oil can. The oil ignited from fire in stove.

Monday, Oct. 31, 6.10 P. M. Still.

No. 20 Harvard Street. Occupied by Thomas Ford as dwelling. Loss, trifling. Cause, top of lighted match flying into paper.

Monday, Oct. 31, 7.24 P. M. Box 28.

Broadway. Cause, false alarm given by some malicious person.

NOVEMBER.

Tuesday, Nov. 1, 3.25 P. M. Still.

No. 4 Garden Street. Owned by Mary Howe as dwelling. No loss. Cause, soot in chimney afire.

Sunday, Nov. 6, 1.21 A. M. Box 71.

No. 2613 Massachusetts Avenue. Owned by Henderson Brothers. Loss, $25. Insurance, $500. Occupied by C. A. Barnes as carriage painter. No loss. Cause, unknown.

Monday, Nov. 7, 10.29 A. M. Box 34.

No. 189 Columbia Street. Owned by J. L. Norris. Loss, $300. Insurance, $1,500. Occupied by Catherine Canty as boarding-house. Loss, $240. Insurance, $1,500. Originated in bath-room on second floor. Cause, explosion of kerosene oil lamp.

Thursday, Nov. 10, 9.47-10. A. M. Box 114.

No. 169 Gore Street. Owned by J. P. Squire Company. Loss, $2,965. Insurance, $5,000. Occupied by J. P. Squire Company, as unused ice-house. Loss, $889. Insurance, $5,000. Supposed cause, rats and matches or spontaneous combustion.

Thursday, Nov. 10, 12.47 P. M. Box 65.

No. 3 Wendell Street. Owned by Joseph Green. Loss, $1,815. Insurance, $5,000. Occupied by Joseph Green as dwelling. Loss, $1,500. No insurance. Cause, defect in furnace pipes.

Thursday, Nov. 10, 4.08 P. M. Box 15.

No. 153 Fifth Street. Owned by J. L. Fahey as dwelling. No loss. Cause, soot in chimney afire.

Friday, Nov. 11, 6.15 P. M. Box 99.

No. 99 Moore Street. Occupied by Charles Hall as dwelling. No loss. Cause, soot in chimney afire.

Tuesday, Nov. 15, 4.55 P. M. Box 43.

No. 99 Banks Street. Occupied by M. G. Mowat as bread store. Loss, trifling. Cause, falling of a kerosene oil lamp.

Wednesday, Nov. 16, 3.27 P. M. Box 168.

Massachusetts Avenue. Cause, accidentally given by a fire alarm employee.

Thursday, Nov. 17, 12.18 A. M. Box 26.

No. 5-9 Portland Street. Owned by Joseph Goddee. Loss, $146. Insurance, $4,000. Occupied by C. W. Grossman as restaurant. Loss, $32. Insurance, $2,000. Originated in the cellar. Cause, unknown.

Monday, Nov. 21, 5.46–5.49, general alarm given. Box 114.

No. 169 Gore Street. Owned by J. P. Squire Company. Loss, $41,626. Insurance, $67,099. Occupied by J. P. Squire Company, as pork packing. Loss, $64,859. Insurance, $89,113. Originated in the oil-room on third floor. Cause, unkown.

Tuesday, Nov. 22, 8.54 A. M. Box 114.

No. 169 Gore Street. Cause, burning ruins. Alarm needless.

Friday, Nov. 25, 7.48 A. M. Box 15.

No. 184 Charles Street. Owned by A. P. Chadburne. Loss, $117. Insurance, $800. Occupied by G. W. Reed as dwelling. Loss, $90. Insurance, $500. Originated in bureau drawer where matches were kept. Cause, rats and matches.

Friday, Nov. 25, 3.24 P. M. Box 121.

No. 31 Rockingham Street. Burning box in yard. Cause, boys playing with fire.

Sunday, Nov. 27, 4.25-4.30 A. M. Box 59.

Nos. 6-8 Brattle Street. Owned by C. and E. Moore. Loss, $9,097. Insurance, $9,750. No. 8. Occupied by Charles Moors & Son as hardware. Loss, $2,725. Insurance, $5,000. No. 6. Occupied by J. H. Wyeth & Company as grocers. Loss, $7,500. Insurance, $8,000. No. 7. Occupied by C. W. Griffith as barber. Loss, $300. Insurance, $500. No. 7. Occupied by W. G. Craig as antique furniture. Loss, $500. Insurance, $500. No. 7. Occupied by E. W. Bettinson as bookbinder. Loss, $450. Insurance, $500. No. 7. Occupied by L. G. MacKeigan as tailor. Loss, $831. Insurance, $1,500. No. 6-8, fourth floor. Occupied by D. K. E. Club. Loss, $400. No insurance. The fire evidently started on the second floor over Wyeth & Company's grocery. Cause, unknown.

Tuesday, Nov. 29, 5.07 P. M. Box 43.

226 Banks Street. Occupied by J. J. Martinez as dwelling. No loss. Cause, upsetting of a kerosene oil lamp.

REPORT OF BOARD OF HEALTH

To the Honorable the City Council :—

In compliance with the public statutes creating Boards of Health and defining their duties, we have the honor to make our annual report for the year ending December 31, 1898.

We respectfully call the attention of your honorable body to the following list of complaints investigated and nuisances abated during the year : —

Full, overflowing, and offensive privy-vaults	8
Offensive and defective water-closets	195
Full and defective cesspools and catch-basins	26
No traps to sinks	40
Leaky and defective traps	45
Defective drainage, open and broken drains	107
Plumbing tests made	131
Filthy yards	696
Filthy stables and cow sheds	8
Manure in yards and lots	10
Wet and damp cellars	21
Stagnant water on premises	13
Dead animals on premises	7
Filthy buildings	18
Filthy cellars	533
New water-closets put in	65
Dirty bakeries	2
Miscellaneous	16
Total	1,941

Number of inspections made	3,158
Number of subsequent inspections	5,483
Total	8,641

Number of notices served	156
Slop closets abolished	6
Offal receptacles cleaned	17
Vacant lots cleaned	2
Defective plumbing in whole house remedied	7
Privy-vaults abolished	29
Cesspools abolished	20
Number of houses placarded	177
Premises disinfected	629
Number of stables from which pigs were removed	2
Number of cellars from which hens were removed	9
Number of houses vacated	5

Medical Inspection of Schools.

The diseases discovered in the schools, and the cases of each disease, are given below : —

Chicken-pox	41
Diphtheria	3
Measles	2
Mumps	16
Pediculosis	42
Scabies	1
Scarlet fever	4
Whooping-cough	8
Diseases of ear	4
Diseases of eye	27
Diseases of skin	32
All other diseases	45
Total	225

The number of cases reported from individual schools ranged from one to twenty-eight.

Bacterial Examinations.

During the year, 560 cultures were examined. The examinations during the various months were as follows : —

January	82	July	24
February	61	August	17
March	54	September	33
April	66	October	52
May	34	November	71
June	19	December	47

The results were positive in 157 instances, and negative in 403 instances.

The cultures were examined for the purpose of diagnosis in 345 instances, and for the purpose of determining whether or not the proper time had come for releasing the patient in 215 instances.

The diagnosis of diphtheria made by the physician was verified in 28 cases. In 58 cases it was not verified.

For the benefit of those who are not experienced in taking cultures, we would state that the surface of the culture medium should not be broken while applying the suspected material to it, but that the wire should be drawn gently over the surface three or four times in parallel lines. Attention to these particulars will facilitate the examination of cultures, and render the determinations derived therefrom more decisive.

Ice.

Pursuant to Sect. 3, of "An Ordinance Regulating the Sale and Delivery of Ice," we have caused an investigation of various bodies of water within the state to be made, and have caused analyses to be made of the ice derived from said bodies of water. We have also caused analyses of the water from the same sources to be made.

The factor of prime importance in determining the wholesomeness of water or ice, and their fitness for consumption, is an investigation of the sources of supply from which the water or ice is obtained, and the liability of the sources

to pollution, especially such pollution as is caused by the excretions of human beings. In comparison with such an investigation, chemical analyses of the water or ice are of secondary importance. It has been well said that such analyses can tell us of danger, but not of safety. The chemical constituents in the water or ice may be of vegetable, of animal, or of human origin, meaning but little in the former two cases, and being of vital importance in the latter. To which of these sources the chemical constituents are due, must be determined by inspection of the neighborhood of the body of water from which the sample of water or ice analyzed is derived.

Consider a concrete instance which will appeal to everyone. A body of water is found with sewage from a house, street, or town flowing into it. It is not supposable that anyone possessing common sense would believe on the showing of any chemical analysis that water from such a source could be consumed with impunity. The analysis is of value as an adjunct to the personal investigation and not as a superseder of it.

It is not possible to set up any analysis as a standard, conformity to which can be accepted as proof positive of the harmlessness of the water analyzed, and this applies with even greater force to ice.

A diminution of the chemical constituents in the ice as compared with the amount in the water, cannot, unfortunately, be accepted as proof that the really dangerous substances, the disease producing micro-organisms, have been eliminated or rendered innocuous.

On the other hand there are certain features which point to pollution of the supply either past or still existing. One of the most valuable of these is afforded by a comparison of the amount of chlorine found to exist in the sample of water examined with the amount of chlorine normal to the region in which the body of water from which the sample was taken is situated. Any marked excess of chlorine in the sample above that normal to the region is indicative of pollution past or present. Whether or not the cause of the pollution has ceased to exist must be determined by inspection of the neighborhood.

The figures in the analyses represent parts per 100,000.

MIRROR LAKE, HUDSON.

Normal Chlorine, 0.20.

	Water.	Ice.
Total solids	4.50	2.00
Volatile and organic matter	3.50	1.50
Chlorine	0.70	0.20
Sediment	Slight	Slight
Free ammonia	0.003	0.003
Albumenoid ammonia	0.011	0.013
Nitrites	0.0000	0.0000
Nitrates	0.0010	0.0002

The water of this lake is used for domestic purposes by the town of Maynard. The ice-houses of the Independent Ice Co. are located here. They have no sanitary conveniences. Near the lake is a house with a wooden box for a privy at the end of a stable, and at the side of stable a pig-pen. At another house all excrement and liquids are deposited on the surface of the ground.

HORN POND, WOBURN.

Normal Chlorine, 0.30.

	Water.
Total solids	10.50
Volatile and organic matter	5.50
Chlorine	1.70
Sediment	Small amount
Free ammonia	0.005
Albumenoid ammonia	0.022
Nitrites	0.0015
Nitrates	0.003

No ice was procurable, the entire supply having been sold and disposed of.

There are several ice-houses around the pond, and two boat-houses. On the northerly side of Sturgis Street there are five privies, and on the southerly side two. One part of this street is close to the pond; other parts are about seventy-five feet distant. No sewer in the street. A brook entering the pond comes from a district inhabited by a farming community.

LAKE QUANNAPOWITT, WAKEFIELD.

Normal Chlorine, 0.38.

	Water.	Ice.
Total solids	7.00	6.00
Volatile and organic matter	4.50	3.75
Chlorine	1.20	0.25
Sediment	Small amount	Considerable
Free ammonia	0.0015	0.0025
Albumenoid ammonia	0.014	0.011
Nitrites	0.0005	0.0000
Nitrates	0.018	0.001

This lake is situated in the central part of the town. The lake is surrounded by dwelling houses with their accompanying privy-vaults; cemeteries, and ice-houses. There is a dumping ground near the lake, and upon it were tin cans, rags, ashes, glass and crockery ware. A part of the sewage of Wakefield is discharged into the lake.

CHEBACCO LAKE, HAMILTON.

Normal Chlorine, 0.65.

	Water.
Total solids	6.00
Volatile and organic matter	3.25
Chlorine	1.10
Sediment	Slight
Free ammonia	0.0015
Albumenoid ammonia	0.016
Nitrites	0.0005
Nitrates	0.025

No ice was procurable, the entire supply having been sold and disposed of.

On the northerly side of the lake is Centennial Grove, *the* picnic ground for Essex County. The privies are about fifty feet from the edge of the lake. Proceeding easterly a swamp is met, on the edge of which is a farmhouse with its privy-vault fifty feet from swamp. Further along is a summer house with a privy-vault close to the water, which at time of inspection was almost surrounded by the water of the lake. Farther on is another summer house,

the privy-vault of which is about twelve feet from the water. Next comes a hotel on a bluff, seventy feet from lake, closed at time of inspection. No privy-vault discoverable. Drainage probably soaks into ground. Proceeding south-easterly a summer house is met with a privy-vault seventy-five feet from water, then two summer houses on high ground with one privy fifty feet from water, then another house with privy vault thirty-five feet from water, then another house with privy-vault twenty-five feet from water. Farther along on westerly side two more houses with privy-vaults distant from water respectively seventy-five and one hundred feet. These houses are on high ground. Farther along are the ice-houses of the Drivers' Union Ice Company, and two stables, also a privy-vault thirty feet from a brook that runs into the lake. Still further westward are other ice-houses with no privies. Then two small houses with one privy-vault ten feet from water, and one house with privy-vault fifteen feet from water.

There are sixteen places around the lake used as summer resorts and picnic grounds. Many of the daily picnickers probably attend to the calls of nature wherever they find a convenient spot, whether close to or remote from the shore of the lake.

NEWFIELD POND, NORTH CHELMSFORD.

Normal Chlorine, 0.20.

	Water.	Ice.
Total solids	4.00	1.50
Volatile and organic matter	2.50	1.00
Chlorine	0.50	0.30
Sediment	Slight	Slight
Free ammonia	0.0015	0.005
Albumenoid ammonia	0.011	0.012
Nitrites	0·0000	0.0000
Nitrates	0.0010	0.0005

Close by the pond are several summer resorts, and cottages for temporary use. Near one of the resorts are two privy-vaults in a depression of the land through which flows the water of the pond. There is also another summer resort with two privy-vaults near the pond. One cottage has a privy in the water; another has a privy upon the surface of the ground; another cottage has no sanitary conveniences. On a small island there is a cottage with the privy-vault at the water's edge. On the shore of the pond are the ice-houses of the Boston Ice Company.

SMITH'S POND, BELMONT.

Normal Chlorine, 0.40.

	Water.
Total solids	17.00
Volatile and organic matter	6.25
Chlorine	1.80
Sediment	Small amount
Free ammonia	0.012
Albumenoid ammonia.	0.022
Nitrites	0.0025
Nitrates	0.150

No ice was procurable, the entire supply having been sold and disposed of.

This pond is connected with Spy Pond, Arlington, by means of a channel which crosses Lake Street, Belmont. A dwelling house is located near this channel, and has a water-closet discharging into said channel. On the north

side of the pond are ice-houses; on the east side a swamp, and beyond the swamp, farm land; on the south and west are farms. The land surrounding the pond drains into it. Large quantities of manure are used on the farming lands. A brook enters the pond on the south side, reeeiving on its way to the pond surface water from Brighton Street, Belmont, and from several large lots of eultivated lands. Near the eorner of Brighton and Pleasant Streets the brook flows through a cow yard, wherein there were fifteen eows at the time when this inspeetion was made. By the side of one of the ditehes earrying surface water to a branch of the brook, twenty cords of rotting manure was stacked. At the junetion of Pleasant, Clifton and Leonard Streets are pipes discharging surfaee water from these streets into the brook. This pond empties into Alewife Brook.

A baeterial examination of a sample of water from this pond made in 1896 revealed the presenee of baeillus coli eommunis, satisfactory baeterial proof of fæeal contamination.

SPY POND, ARLINGTON.

Normal Chlorine, 0.40.

	Water.	Ice.
Total solids	19.00	3.00
Volatile and organic matter	7.00	2.00
Chlorine	2.70	0.30
Sediment	Small amount	Slight
Free ammonia	0.018	0.004
Albumenoid ammonia	0.024	0.017
Nitrites	0.004	0.0002
Nitrates	0.050	0.005

On the easterly side is situated a pleasure resort, the Suburban Hotel, with its grove. In the grove is a privy for women, and one for men. The men's is so situated that the liquid eontents may run directly to the pond, unless it soaks into the ground on the way. The hotel drains to a plank eesspool, fifty feet from the pond. The oecupant of the hotel says he has had dug at varying distanees from the cesspool three holes, filled with ehip stones, and eonneeted each with the cesspool by means of a ehip-stone drain. On the northerly side of the pond are the iee-houses of the Cambridge Ice Co. Between two of the buildings is a privy-vault, full at the time of inspection, fifty feet from the pond. At a dwelling house near by is a wooden privy-vault, full, about seventy-five feet from the pond. There are several boat-houses by the pond, one of which has water-closets and urinals diseharging into a eesspool under the building, and within twenty-five feet of the pond. A large quantity of water flows into the pond from the streets in the vieinity. There are quite a number of houses and stables in the neighborhood from whieh a quantity of sewage may find its way to the pond. The use of night-soil as a manure on the farms around the pond has, we are told, been diseontinued.

LAKE MASSAPOAG, SHARON.

Normal Chlorine, 0.26.

	Water.	Ice.
Total solids	5.50	3.50
Volatile and organic matter	2.50	1.50
Chlorine	0.70	0.30
Sediment	Slight	Considerable
Free ammonia	0.0015	0.0025
Albumenoid ammonia	0.016	0.017
Nitrites	0.0003	0.0001
Nitrates	0.005	0.003

On the northerly side of the lake is a hotel and picnic ground with drainage to cesspools. On the easterly side are five houses with privy-vaults, and a summer house directly over the water. On the southerly side are several houses. On the westerly side is a large hotel with drainage to cesspools said to be perfectly tight. Also a house with a privy, where the excrement falls on the surface of the ground, about seventy-five feet from lake. At this lake are ice-houses of the Drivers' Union Ice Company.

New Regulations.

"All cesspools hereafter established shall be constructed of brick or stone, and cement, so as to be thoroughly water-tight, and of convenient access for opening, cleaning and inspection."

Adopted December 29, 1897.

"No person shall remove, or carry in or through any public or private way within the City any decaying article of food, or any stinking or offensive matter, or any house dirt, garbage, manure, grease or bones, or any refuse substances, except in accordance with a license from the Board of Health."

Adopted March 23, 1898.

"All buildings occupied or let as dwelling-houses situated on a public or private street, court or passageway, in which there is a public sewer or drain connecting with a public sewer shall be provided with sufficient water-closets, which shall be kept at all times supplied with water by a proper system of pipes running thereto, and maintained in working order; and all buildings so occupied and situated in which water-closets are not supplied and maintained in accordance with this regulation shall on the order of the Board of Health be forthwith vacated and shall not again be occupied or let for dwelling-house purposes until so supplied."

Adopted November 2, 1898.

"The Board of Health hereby adjudges that the use of 'Wall Draperies' at funerals is a source of filth and cause of sickness and hereby orders: That the use of such draperies in any room or place used for a funeral or for the preparation or retention of any human body before or in connection with such funeral, be and hereby is forbidden."

Any person violating the foregoing regulation shall forfeit a sum not exceeding one hundred (100) dollars.

Adopted December 14, 1898.

Acts of 1898, 496, Sect. 11.

"No child who has not been duly vaccinated shall be admitted to a public school except upon presentation of a certificate signed by a regular practising physician that such child is an unfit subject for vaccination. No child who is a member of a household in which a person is sick with small-pox, diphtheria, scarlet fever or measles, or of a household exposed to contagion from a household as aforesaid, shall attend any public school during such sickness or until the teacher of the school has been furnished with a certificate from the Board of Health of the town or city, or from the attending physician of such sick person, stating in a case of small-pox, diphtheria or scarlet fever, that a period of at least two weeks, and in a case of measles a period of at least three

days, has elasped since the recovery, removal or death of such person, and that danger of the conveying of such disease by such child has passed."

Ambulance.

The new ambulance for the conveyance to hospital of cases of infectious diseases was delivered to the Board in October.

E. EDWIN SPENCER,
CHARLES HARRIS,
THOMAS HUNT,
} *Board of Health of City of Cambridge.*

OFFICE OF BOARD OF HEALTH,
CITY HALL, December 31, 1898.

To the Honorable the City Council:—

This Board herewith respectfully submits its annual financial statement, it being for the year ending November 30, 1898:—

Amount appropriated for Health Department		$17,500 00

AMOUNT EXPENDED.

Advertising	$6 19	
Ambulance (new)	590 77	
" (cost of running)	269 33	
Bacteriological examinations	1,080 00	
" laboratory supplies	50 19	
Blueing	1 30	
Burial of animals	49 00	
Candles	1 10	
Car tickets	450 00	
Card index cabinet	55 00	
Care of patients in hospital	2,854 88	
Carriage hire	63 00	
Chemicals	140 95	
Desk and chair	48 85	
Directory	3 00	
Dump signs	13 30	
Expressage	2 10	
Formaldehyde lamps and maintenance	20 65	
Harness and wagon repairs	59 06	
Inspection of ice	98 87	
Keep of horses, shoeing and storage	555 75	
Legal services	154 00	
Matches and tacks	1 17	
Overalls	60	
Public urinals (tools, disinfectants and maintenance)	77 35	
Printing and postage	214 44	
Service of notices	42 77	
Services of Medical Inspector and Physician to Board	3,000 00	
" " Clerk	1,200 00	
" " Executive Agent	800 00	
" " Sanitary Inspectors	2,364 18	
" " Driver	678 20	
" " Plumber	853 80	
School inspection (services of physicians)	1,238 51	
Shoes	2 00	
Sleigh	45 00	
Stamps	8 00	
Stationery	49 83	
Telephones	353 50	
Total expenditures		17,496 64
Balance of appropriation unexpended		$3.36

By direction of the Board of Health,

JAMES B. SOPER,
Clerk.

VITAL STATISTICS.

Death rate, per 1000 living, from all causes.

1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.
19.17	17.05	19.24	19.44	20.89	19.56	18.40	18.73	17.63	17.18

The mean annual death rate for the ten years 1889 to 1898 inclusive, was 18.72.

In calculating the death rates given above, the deaths of non-residents occurring in the City were excluded, and the deaths of residents wherever they occurred were included.

Scarlet Fever.

Cases Reported.

Ward	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Tot.
1.....	4	0	7	2	2	2	2	1	1	2	0	3	26
2.....	8	7	6	5	1	5	3	3	1	4	9	0	52
3.....	0	0	0	0	0	1	1	1	0	0	0	1	4
4.....	5	4	2	2	2	0	0	0	1	5	0	2	23
5.....	5	2	2	2	0	1	1	0	2	0	0	2	17
Total	22	13	17	11	5	9	7	5	5	11	9	8	122

The reported cases of Scarlet Fever show a decrease of 109 from those reported in 1897.

Ward 1 shows a decrease of 12 cases.
Ward 2 shows an increase of 3 cases.
Ward 3 shows a decrease of 28 cases.
Ward 4 shows a decrease of 31 cases.
Ward 5 shows a decrease of 41 cases.

The reported cases give a morbidity of 1.30 per 1,000 persons living, and a fatality of 4.91%.

Cases Reported Weekly.

	Cases.		Cases.
Week ending January 1	1	Week ending April 2	5
" " " 8	3	" " " 9	3
" " " 15	3	" " " 16	2
" " " 22	8	" " " 23	4
" " " 29	7	" " " 30	0
Week ending February 5	2	Week ending May 7	0
" " " 12	7	" " " 14	3
" " " 19	2	" " " 21	0
" " " 26	3	" " " 28	2
Week ending March 5	3	Week ending June 4	2
" " " 12	6	" " " 11	1
" " " 19	0	" " " 18	3
" " " 26	5	" " " 25	1

	Cases.		Cases.
Week ending July 2	2	Week ending October 1	2
" " " 9	2	" " " 8	2
" " " 16	1	" " " 15	2
" " " 23	1	" " " 22	3
" " " 30	3	" " " 29	3
Week ending August 6	1	Week ending November 5	4
" " " 13	1	" " " 12	1
" " " 20	1	" " " 19	1
" " " 27	1	" " " 26	2
Week ending September 3	2	Week ending December 3	3
" " " 10	0	" " " 10	3
" " " 17	1	" " " 17	1
" " " 24	1	" " " 24	1
		" " " 31	2

Age and Sex Distribution of 121 Cases.

Age.	Males.	Females.	Persons.
0– 1 Year	1	0	1
1– 2 Years	1	3	4
2– 3 "	12	2	14
3– 4 "	9	10	19
4– 5 "	13	11	24
5–10 "	23	16	39
10–15 "	3	6	9
15–20 "	2	2	4
20–30 "	2	3	5
30–40 "	1	1	2
Total	67	54	121

Death Rate per 1000 Living.

1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.
0.10	0.14	0.13	0.22	0.87	1.27	0.20	0.07	0.11	0.06

Morbidity, or Sick Rate, per 1000 Living.

1.70	2.69	4.90	5.01	8.84	11.37	3.59	2.35	2.66	1.30

Fatality, or Case Death Rate, Percentage.

6.03	5.29	2.82	4.54	9.85	11.20	5.80	3.03	4.32	4.91

For the ten years recorded above the mean annual death rate was 0.31; the mean annual morbidity 4.44; the mean annual fatality 5.77.

Diphtheria.

Cases Reported.

Ward	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Tot.
1.....	8	3	3	3	1	2	3	0	0	0	2	0	25
2.....	9	1	0	2	1	1	2	7	7	11	19	9	69
3.....	0	0	1	2	0	1	0	0	0	0	1	0	5
4.....	3	3	5	2	1	1	6	1	2	3	3	5	35
5.....	3	3	0	0	0	0	1	1	1	0	5	4	18
Total	23	10	9	9	3	5	12	9	10	14	30	18	152

The reported cases of diphtheria show a decrease of 169 from those reported in 1897.

Ward 1 shows a decrease of 16 cases.
Ward 2 shows a decrease of 26 cases.
Ward 3 shows a decrease of 38 cases.
Ward 4 shows a decrease of 68 cases.
Ward 5 shows a decrease of 21 cases.

The reported cases give a morbidity of 1.69 per 1000 persons living, and a fatality of 19.07 %.

Cases Reported Weekly.

	Cases.		Cases
Week ending January 1	9	Week ending July 2	0
" " " 8	3	" " " 9	2
" " " 15	3	" " " 16	3
" " " 22	7	" " " 23	6
" " " 29	8	" " " 30	1
Week ending February 5	5	Week ending August 6	4
" " " 12	2	" " " 13	2
" " " 19	4	" " " 20	0
" " " 26	1	" " " 27	2
Week ending March 5	1	Week ending September 3	2
" " " 12	2	" " " 10	2
" " " 19	2	" " " 17	2
" " " 26	2	" " " 24	4
Week ending April 2	3	Week ending October 1	1
" " " 9	4	" " " 8	2
" " " 16	1	" " " 15	1
" " " 23	2	" " " 22	3
" " " 30	1	" " " 29	7
Week ending May 7	0	Week ending November 5	6
" " " 14	0	" " " 12	5
" " " 21	2	" " " 19	5
" " " 28	1	" " " 26	11
Week ending June 4	1	Week ending December 3	8
" " " 11	1	" " " 10	2
" " " 18	3	" " " 17	3
" " " 25	0	" " " 24	3
		" " " 31	5

Age and Sex Distribution of 146 Cases.

Age.	Males.	Females.	Persons.
0– 1 Year	1	0	1
1– 2 Years	4	5	9
2– 3 "	6	6	12
3– 4 "	11	4	15
4– 5 "	5	11	16
5–10 "	28	25	53
10–15 "	9	7	16
15–20 "	2	3	5
20–30 "	5	7	12
30–40 "	4	1	5
40–50 "	1	1	2
Total	76	70	146

Death Rate, per 1000 Living.

1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898
1.63	0.52	0.22	0.75	0.53	0.76	1.29	0.73	0.58	0.32

Morbidity, or Sick Rate, per 1000 Living.

5.16	2.24	1.59	1.74	1.33	2.24	7.27	5.40	3.69	1.69

Fatality, or Case Death Rate, Percentage.

29.3	20.3	13.0	37.8	36.8	32.5	17.8	13.6	15.8	19.0

For the ten years recorded above, the mean annual death rate was 0.73; the mean annual morbidity 3.23; the mean annual fatality 23.6.

Of the reported cases seven were of that form called membranous croup. Of these seven cases six were fatal; a fatality of 85.71 %.

The fatality of the remaining 145 cases, those reported as diphtheria was 15.17 %.

Circumstances point to the existence during a part of the past year of a diminished infectivity of certain diseases, notably scarlet fever and diphtheria, over a somewhat wide area.

Despite this fortunate occurrence the fact remains, that mortals who cannot control cosmic influences, must rely upon prompt and complete isolation of the sick as the most effective measure for the prevention of the spread of infectious diseases. Such isolation in the great majority of cases can only be carried out in hospitals devoted especially to such a purpose.

That the isolation should be prompt it is essential that the hospital should be in readiness for the reception of cases before the need for its use arises. The inevitable delay in the preparation of a hospital after a disease has broken out in a community would render its usefulness as a preventive measure in that outbreak of little value. That complete isolation is impossible of attainment in an ordinary household no one of any experience in such matters need be told.

To institute isolation that is less than prompt and complete is to offer to the community a measure of protection that serves to "keep the word of promise to our ear, and break it to our hope."

Typhoid Fever.

Cases Reported.

Ward.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1.....	3	0	0	0	0	0	2	1	8	6	5	4	29
2.....	0	0	0	1	0	2	2	3	7	8	2	0	25
3.....	0	0	1	0	0	0	0	0	4	0	0	0	5
4.....	1	0	0	1	2	0	1	3	6	2	1	3	20
5.....	0	0	2	1	2	2	0	0	4	4	0	2	17
Total.	4	0	3	3	4	4	5	7	29	20	8	9	96

The reported cases of typhoid fever show a decrease of nine from those reported in 1897.

Ward 1 shows an increase of 16 cases.
Ward 2 shows a decrease of 10 cases.
Ward 3 shows a decrease of 1 case.
Ward 4 shows a decrease of 6 cases.
Ward 5 shows a decrease of 8 cases.

The reported cases give a morbidity of 1.06 per 1000 persons living, and a fatality of 14.5 %.

The distribution of ninety cases according to the months in which the disease was probably contracted is as follows:

November, 1897	1	June, 1898	3
December, "	2	July, "	6
January, 1898	3	August, "	21
February, "	1	September, "	21
March, "	2	October, "	11
April, "	4	November, "	6
May, "	6	December, "	3

There is satisfactory evidence that fourteen cases were contracted outside of the City. The remaining eighty-two cases may, from lack of any evidence to the contrary, be accepted as indigenous.

Age and Sex Distribution of 95 Cases.

Age.	Males.	Females.	Persons.
3– 4 Years	2	2	4
4– 5 "	1	0	1
5–10 "	6	2	8
10–15 "	10	7	17
15–20 "	7	5	12
20–30 "	15	10	25
30–40 "	10	8	18
40–50 "	5	1	6
50–60 "	0	3	3
60–70 "	0	1	1
Total	56	39	95

The male morbidity, 1.27 per 1,000 males, is, owing possibly to greater exposure incident to a different course of life, much in excess of the female, 0.84 per 1,000 females.

Death Rate per 1000 Living.

1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.
0.36	0.24	0.22	0.20	0.20	0.29	0.14	0.35	0.12	0.15

Morbidity, or Sick Rate, per 1000 Living.

2.94	1.08	0.97	1.07	1.20	1.50	1.31	3.03	1.20	1.06

Fatality, or Case Death Rate, Percentage.

13.5	25.	22.8	18.7	17.3	17.5	11.2	11.7	10.4	14.5

For the ten years recorded above, the mean annual death rate was 0.22; the mean annual morbidity 1.53; the mean annual fatality 16.2 %.

Measles.

Cases Reported.

Ward.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1.....	10	1	1	3	1	0	0	0	0	0	0	1	17
2.....	3	1	0	1	7	5	1	2	0	5	0	1	26
3.....	0	0	0	0	2	0	0	0	0	0	0	0	2
4.....	1	0	0	1	1	1	0	0	0	0	1	0	5
5.....	0	0	1	1	0	0	0	0	0	1	0	0	3
Total.	14	2	2	6	11	6	1	2	0	6	1	2	53

The reported cases of measles show a decrease of 357 from those reported in 1897.

Ward 1 shows a decrease of 105 cases.
Ward 2 shows a decrease of 71 cases.
Ward 3 shows a decrease of 14 cases.
Ward 4 shows a decrease of 134 cases.
Ward 5 shows a decrease of 33 cases.

The reported cases give a morbidity of 0.59 per 1,000 persons living, and a fatality of 1.8 %.

The returns of cases of measles are so incomplete that the deductions based thereon are of little value.

As measles has by Chapter 496, Section XI, of the Acts of 1898 been included among the diseases excluding pupils from the public schools, a more strict report of cases of this disease is now necessary.

Age and Sex Distribution of 48 Cases.

Age.	Males.	Females.	Persons.
0– 1 Year	1	0	1
1– 2 Years	2	2	4
2– 3 "	3	0	3
3– 4 "	2	2	4
4– 5 "	2	0	2
5–10 "	5	9	14
10–15 "	1	1	2
15–20 "	2	5	7
20–30 "	2	7	9
40–50 "	0	2	2
Total	20	28	48

Death Rate per 1,000 Living.

Disease.	1889	1890	1891	1892	1893	1894	1895	1896	1897	1898
Cancer.....	0.64	0.67	0.72	0.56	0.60	0.59	0.77	0.64	0.53	0.79
Diarrhœal Diseases.....	1.79	1.82	1.92	2.04	1.64	2.14	1.69	2.35	2.18	1.96
Measles.....	0.17	0.01	0.11	2.02	0.14	0.00	0.03	0.06	0.03	0.01
Phthisis.....	2.63	2.49	2.73	2.69	2.76	2.08	2.22	2.30	2.26	2.08
Whooping-cough.....	0.19	0.18	0.16	0.14	0.20	0.43	0.13	0.21	0.19	0.24
Bronchitis.....	0.72	0.68	0.76	0.87	0.85	0.65	0.50	0.70	0.62	0.51
Pneumonia.....	1.35	1.52	1.65	1.45	2.06	1.41	1.40	1.90	1.18	1.62

The mean annual death rate for the ten years recorded above was of cancer 0.65; of diarrhœal diseases 1.95; of measles 0.05; of phthisis 2.42; of whooping-cough 0.20; of bronchitis 0.68; of pneumonia 1.55.

The death rate of diarrhœal diseases in the past year was practically identical with the mean of the ten years recorded above. The death rate of measles, and of bronchitis was below, and that of whooping-cough, and of pneumonia above, the ten-year mean.

The death rate of cancer was considerably higher than the ten-year mean. When compared with the mean rates prevailing in the decade 1881–1890 it appears that the male rate rose from 0.41 to 0.43, the female from 0.78 to 1.13, and that of all persons from 0.60 to 0.79.

The death rate of phthisis was below the ten-year mean. Comparing it with the mean rate of the decade 1881–1890 a fall appears from 2.90 to 2.08. The male death rate in 1898 was 2.12 compared with 2.45 in 1897, and with 2.79, the mean, in 1881–1890. The female death rate in 1898 was 2.04 compared with 2.09 in 1897, and with 3.00, the mean, in 1881-1890.

Return of Deaths (Non-Residents Omitted).

Age and Sex Distribution.

Age.	Males.	Females.	Persons.
0– 1 Year	231	177	408
1– 2 Years	44	49	93
2– 3 "	16	13	29
3– 4 "	18	8	26
4– 5 "	7	7	14
5–10 "	19	14	33
10–15 "	5	13	18
15–20 "	24	23	47
20–30 "	80	65	145
30–40 "	71	59	130
40–50 "	50	74	124
50–60 "	55	70	125
60–70 "	63	79	142
70–80 "	66	67	133
Over 80 "	26	49	75
Total	775	767	1,542

Monthly Distribution.

January	148	July	135
February	115	August	189
March	120	September	166
April	120	October	129
May	125	November	101
June	81	December	113

Causes.

	Males.	Females.	Persons.
Bronchitis	23	23	46
Pneumonia	65	81	146
Cancer	19	52	71
Cerebro-spinal meningitis	12	7	19
Cholera infantum	40	44	84
Diarrhœa and cholera morbus	40	47	87
Dysentery	3	2	5
Diphtheria and croup	17	12	29
Erysipelas	1	2	3
Carried forward	220	270	490

	Males.	Females.	Persons.
Brought forward	220	270	490
Fever, malarial	0	1	1
" scarlet	5	1	6
" typhoid	8	6	14
Influenza	7	9	16
Measles	1	0	1
Myxœdema	1	0	1
Phthisis	93	94	187
Puerperal septicæmia	0	4	4
Whooping-cough	13	9	22
Diseases of brain and spinal cord	99	98	197
" " heart	55	42	97
" " kidneys	34	31	65
Accident	39	10	49
Suicide	5	3	8
Unknown and ill-defined	79	59	138
All other causes	116	130	246
Total	775	767	1,542
Still births	83	43	126

Annual Death Rates from All Causes per 1000 Living.

Age.	Males.	Females.	Persons.
All Ages	17.70	16.68	17.18
0– 1 Year	232.62	181.53	207.31
1– 2 Years	80.73	89.57	85.16
2– 3 "	15.95	12.57	14.22
3– 4 "	20.04	8.51	14.14
4– 5 "	7.47	7.81	7.64
0– 5 "	72.21	57.83	65.00
5–10 "	4.79	3.47	4.13
10–15 "	1.40	3.70	2.54
15–20 "	5.67	5.59	5.63
20–30 "	7.56	6.22	6.89
30–40 "	10.13	8.02	9.10
40–50 "	10.73	14.17	12.35
50–60 "	18.64	19.98	19.29
60–70 "	39.62	37.28	38.28
70–80 "	104.92	67.13	81.74
Over 80 "	143.64	144.11	143.95

Children under five years of age constituted 9.6 % of the total population. Of the total deaths this 9.6 % furnished 65 %. It furnished 81.6 % of all deaths from diarrhœal diseases; 62% of all deaths from diphtheria: and all the deaths from scarlet fever, whooping-cough and measles.

A Comparison of the Death Rates of the Second Decade, 1881-1890, with those of the First Decade, 1871-1880.

A key is appended which shows the nature of the changes occurring in the Second Decade.

The marriage-rate is calculated from the number of marriages, not from the number of persons married. Marriages in which both contracting parties are non-residents are omitted in the calculation.

All births occurring in Cambridge are included in the calculation, irrespective of the legal residence of the parent or parents.

The tables bear their own explanation, but a few comments are here added on such of the rates as appear to be worthy of special consideration.

M. stands for males, F. for females, P. for all persons.

All Causes. — At all ages the rate for all persons fell from 20.05 to 19.10. The male rate fell from 20.24 to 19.44, and the female rate from 19.87 to 18.74. The fall in the female rate is 5. 48% against 3.95% in the male rate.

It also appears that the fall in the male rates is, with the exception of the age period 70-80, confined to persons between one and ten years of age. The fall in the female rates, besides being more general, is unbroken in the age periods from 20 to 50, a time when female lives are of the greatest value to the state.

Cancer.— At all ages the P. rate rose from 0.38 to 0.60; the M. rate from 0.22 to 0.41; the F. rate from 0.53 to 0.78.

Although the F. rate is much higher than the M. the increase in the M. rate is vastly greater than that in the F. rate, being 86.36% against 47.15%. From five years of age on through every period in which deaths occurred the M. rates rose, while the F. rates fell at three periods, and showed no change at one period.

Consumption.— At all ages the general rate in each decade was practically unchanged. The male rate, however, rose from 2.71 to 2.79, an increase of 2.95%, while the female rate fell from 3.07 to 3.00, a decrease of 2.28%.

In each decade the male rate reached its maximum at the age period 70–80; and the female at 20–30. Both maxima were lower in the second than in the first decade.

Diarrhœal Diseases.— The death rate of all persons at all ages fell from 2.93 in a first decade to 1.86 in the second decade. The fall in the male rate was from 3.07 to 2.08, or 32.24%.

In the female rate the fall was from 2.80 to 1.66, or 40.71%.

0–1.— In this age period the male rate rose from 79.96 to 85.40, while the female rate fell from 77.30 to 60.18.

0–5.— Both rates fell, the male from 22.70 to 18.02, the female from 20.61 to 15.27.

Diphtheria.— The general rate at all ages rose from 1.09 to 1.23; the male rate from 1.16 to 1.32, and the female rate from 1.03 to 1.15. With the exception of the period 0–1 the general rate rose at all periods up to twenty years, from which age it fell in all remaining periods. The male rate rose in all periods from birth to twenty years, and the female in 1–10, 15–20, 40–50.

Scarlet Fever.—The general rate fell at all ages and in every age period. The male rate at every period excepting 15–20; the female at every period excepting 30–40.

TABLE I.

CAMBRIDGE, MASS., 1871-1880 INCLUSIVE.

ANNUAL DEATH-RATE PER 1000 LIVING.

		All Ages.	0-1	1-2	2-3	3-4	4-5	0-5	5-10	10-15	15-20	20-30	30-40	40-50	50-60	60-70	70-80	Over 80
All Causes	M..	20.24	239.53	97.53	34.91	25.09	16.86	81.44	9.64	3.62	4.93	7.61	9.17	11.89	19.92	40.34	89.84	232.14
	F...	19.87	217.15	82.70	34.98	18.48	17.69	72.93	8.65	5.40	6.15	9.37	10.95	12.43	16.28	32.93	74.29	181.61
	P...	20.05	228.57	89.79	34.94	21.62	17.24	77.20	9.14	4.52	5.54	8.54	10.14	12.17	18.03	36.39	80.25	196.35
Cancer	M..	0.22	0.17	.....	.....	.....	.....	0.03	.....	.....	.....	.....	0.02	0.25	1.08	1.86	3.00	3.57
	F...	0.53	.....	.....	.....	.....	.....	.....	0.04	.....	.....	0.07	0.50	1.23	1.76	2.27	4.20	2.94
	P...	0.38	0.09	.....	.....	.....	.....	0.01	0.02	.....	.....	0.04	0.27	0.76	1.43	2.08	3.74	3.12
Cerebro-Spinal Meningitis	M..	0.13	1.41	0.82	0.49	0.18	.....	0.57	0.08	.....	0.30	0.08	0.02	0.04	.....	0.11	.....	.....
	F...	0.14	1.66	1.12	0.67	0.16	0.19	0.75	0.33	0.14	0.08	0.01	.....	0.03	.....	.....	.....	.....
	P...	0.14	1.53	0.98	0.58	0.17	0.08	0.66	0.20	0.07	0.19	0.05	0.01	0.04	.....	0.05	.....	.....
Consumption	M..	2.71	3.19	2.66	1.80	0.37	0.50	1.68	0.20	0.19	1.92	3.63	3.75	4.12	3.88	5.34	7.14	1.78
	F...	3.07	4.05	3.19	1.70	0.33	0.38	1.90	0.28	1.19	3.37	4.56	3.96	3.16	3.48	4.25	4.43	3 67
	P...	2.90	3.61	2.94	1.75	0.35	0.44	1.79	0.24	0.17	2.65	4.12	3.86	3.62	3.67	4.75	5.47	3.12
Diarrhœal Diseases	M..	3.07	79.96	27.92	4.75	1.48	1.68	22.70	0.70	0.24	0.04	0.19	0.25	0.12	0.57	1.16	1.87	14.28
	F...	2.80	77.30	23.68	3.24	0.67	0.76	20.61	0.16	.....	0.04	0.11	0.37	0.38	0.94	3.06	4.67	9.55
	P...	2.93	78.66	25.71	4.01	1.05	1.25	21.66	0.43	0.12	0.04	0.15	0.32	0.26	0.76	2.19	3.60	10.93
Diphtheria	M..	1.16	4.07	11.08	7.70	7.43	4.72	6.87	2.42	0.39	0.04	0.06	0.11	0.08	0.06	.....	.....	.....
	F...	1.03	2.95	6.57	8.70	5.04	5.96	5.87	2.89	0.67	0.04	0.07	0.05	.....	.....	.....	.....	.....
	P...	1.09	3.52	8.73	8.19	6.17	5.30	6.37	2.66	0.53	0.04	0.07	0.08	0.04	0.03	.....	.....	.....
Fever, Scarlet	M..	0.89	2.65	8.62	5.73	6.69	4.04	5.44	1.87	0.34	.. ...	0.02	0.05	.....	.....	.....	.....	.....
	F...	0.71	2.21	6.76	4.60	4.36	3.26	4.25	1.82	0.23	0.12	0.09	.....	0.03	.....	.....	.....	.....
	P...	0.80	2.44	7.65	5.18	5.47	3.68	4.85	1.85	0.29	0.06	0.06	0.02	0.02	.....	.....	.....	.....
Fever, Typhoid	M..	0.36	.....	0.41	.....	0.74	0.33	0.28	0.41	0.19	0.60	0.49	0.22	0.25	0.31	0.58	0.37	1.78
	F...	0.33	.....	.....	0.17	... ..	0.38	0.10	0.20	0.52	0.51	0.38	0.34	0.19	0.53	0.09	0.46	.....
	P...	0.34	.....	0.19	0.08	0.35	0.35	0.19	0.31	0.36	0.55	0.43	0.28	0.22	0.42	0.32	0.43	0.52
Influenza	M..	.....	.....	.....	.....	.....	.....	.....	.....	.....	. ....	.....	.....	.....	.....	.....	.....	.....
	F...	0.004	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.23	.....
	P...	0.002	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.14	.....
Measles	M..	0.10	1.41	1.02	0.81	0.92	0.16	0.85	0.04	.....	.....	.....	.....	.....	.....	.....	.....	.....
	F...	0.09	0.92	1.87	0.51	0.16	0.38	0.75	0.04	0.04	.....	.....	.....	.....	.... .	.....	.....	.....
	P...	0.10	1.17	1.47	0.66	0.52	0.26	0.80	0.04	0.02	.....	.....	.....	.....	.....	.....	.....	.....
Small-pox	M..	0.19	0.88	0.20	.....	.....	0.50	0.32	0.12	0.04	0.08	0.29	0.22	0.12	.....	0.11	.....	.....
	F...	0.08	0.36	0.37	.....	....	0.19	0.18	0.12	.....	.....	0.13	0.10	.....	0.05	.....	0.46	.....
	P...	0.13	0.63	0.29	.....	.....	0.35	0.25	0.12	0.02	0.04	0.21	0.16	0.06	0.03	0.05	0.28	.....
Whooping-cough	M..	0.18	4.43	2.25	0.65	0.36	0.16	1.54	0.04	.....	.....	.....	.....	.....	.....	.....	... ..	.....
	F...	0.23	5.90	3.38	0.68	0.16	0.19	2.01	0.04	.....	.....	.....	.....	0.03	.....	.....	.....	.....
	P...	0.21	5.15	2.84	0.67	0.26	0.17	1.77	0.04	.....	.....	.....	.....	0.02	.....	.....	.....	.....
Pneumonia and Bronchitis	M..	2.19	25.70	10.88	3.44	2.04	1.51	8.56	1.00	0.19	0.42	0.62	0.90	1.44	2.92	4.41	13.53	28.57
	F...	2.14	21.40	12.96	4.26	2.01	1.92	8.36	0.24	0.43	0.47	0.75	1.09	1.54	1.71	5.14	11.44	15.44
	P...	2.16	23.59	11.97	3.84	2.03	1.70	8.49	0.62	0.31	0.44	0.69	0.99	1.49	2.29	4.81	12.24	19.27
Diseases of Heart	M..	0.73	4.43	0.20	.....	0.36	.....	1.00	0.25	0.19	0.17	0.23	0.42	0.67	1.71	4.30	7.51	5.35
	F...	0.72	2.95	0.18	.....	.....	0.19	0.64	0.16	0.47	0.17	0.27	0.53	0.73	1.53	3.36	4.90	6.62
	P...	0.73	3.70	0.19	.....	0.17	0.08	0.82	0.20	0.33	0.17	0.25	0.47	0.70	1.62	3.79	5.90	6.25
Diseases of Brain and Spinal Cord	M..	2.00	17.37	14.98	5.24	2.04	0.84	7.84	0.91	0.39	0.21	0.21	0.50	1.06	2.54	7.55	15.03	23.21
	F...	1.87	16.42	8.45	5.63	1.51	1.34	6.59	0.99	0.71	0.38	0.28	0.39	0.92	2.00	3.95	13.55	33.08
	P...	1.93	16.90	11.58	5.43	1.76	1.07	7.22	0.95	0.55	0.29	0.25	0.45	0.99	2.26	5.61	14.12	30.20
Diseases of Kidneys	M..	0.40	0.53	0.41	.....	0.18	.....	0.21	.....	.....	0.17	0.23	0.22	0.46	1.59	2.20	4.13	.....
	F...	0.26	0.18	.....	.....	.....	.....	0.03	0.16	.....	0.08	0.27	0.29	0.23	0.47	1.18	1.40	0.73
	P...	0.33	0.36	0.19	.....	0.08	.....	0.12	0.08	.....	0.12	0.25	0.26	0.34	1.01	1.65	2.44	0.52
Suicide	M..	0.06	.....	.....	.....	.....	.....	.....	.....	.....	0.04	0.02	0.08	0.12	0.31	0.11	0.37	.....
	F...	0.01	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.05	.....	0.03	.....	.....	.....	.....
	P...	0.03	.....	.....	.....	.....	.....	.....	.....	.....	0.02	0.04	0.04	0.08	0.15	0.05	0.14	.....
All other causes	M..	5.78	93.26	16.01	4.26	2.23	2.36	23.49	1.54	1.42	0.90	1.49	2.31	3.10	4.90	12.55	36.84	153.57
	F...	5.80	80.81	14.09	4.78	4.03	2.50	20.82	1.11	0.95	0.85	2.26	3.40	3.86	3.77	9.59	28.50	109.55
	P...	5.79	87.16	15.01	4.51	3.17	2.42	22.16	1.33	1.18	0.87	1.89	2.87	3.49	4.31	10.95	31.70	122.39

Marriage-rate: 8.36.

Birth-rate per 1,000 living: M = 29.31, F = 26.41, P = 27.84

Still-births per 100 births: M = 5.45, F = 3.69, P = 4.59

TABLE II.

CAMBRIDGE, MASS., 1881-1890 INCLUSIVE.

ANNUAL DEATH-RATE PER 1000 LIVING.

		All Ages.	0-1	1-2	2-3	3-4	4-5	0-5	5-10	10-15	15-20	20-30	30-40	40-50	50-60	60-70	70-80	Over 80
All Causes	M..	19.44	278.11	77.77	27.08	18.60	16.74	77.07	7.63	4.25	5.10	8.00	9.56	13.26	21.64	42.36	83.36	243.03
	F...	18.78	196.84	95.15	27.77	18.47	16.29	68.72	8.03	4.37	7.46	8.50	10.44	12.18	18.33	34.69	75.62	170.87
	P...	19.10	235.06	85.88	27.42	18.53	16.53	72.94	7.84	4.31	6.28	8.26	10.02	12.70	19.87	37 95	78.81	190.87
Cancer	M..	0.41	.....	.....	.....	.....	.....	.....	0.03	.....	0.06	0.01	0.17	0.45	1.33	3.16	6.10	3.79
	F...	0.78	.....	.....	.....	.....	.....	.....	.....	.....	0.06	0.07	0.40	1.21	2.83	3.27	7.97	6.31
	P...	0.60	.....	.....	.....	.....	.....	.....	0.01	.....	0.06	0.04	0.29	0.84	2.13	3.22	7.20	5.61
Cerebro-Spinal Meningitis	M..	0 05	1.06	0.20	0.27	.....	0.15	0.32	0.06	0.10	.....	0.01	.....	.....	.....	.....	.....	.....
	F...	0.04	.....	0.46	.....	.....	0.16	0.09	0.12	0.10	0.06	0.02	.....	.....	.....	.....	.....	.....
	P...	0.04	0.50	0.32	0.14	.....	0.16	0.21	0.09	0.10	0.03	0.02	.....	.....	.....	.....	.....	.....
Consumption	M..	2.79	3.38	1.41	0.41	1.08	0.30	1.23	0.35	0.50	2.07	4.30	3.76	3.69	3.51	4.51	5.47	.....
	F...	3.00	2.52	2.07	0.71	0.61	0.16	1.16	0.69	1.23	4.02	4.54	4.04	3.25	2.36	3.00	3.69	1 45
	P...	2.90	2.92	1.72	0.56	0.84	0.24	1.19	0.53	0.87	3.04	4.42	3.91	3.46	2.89	3.64	4.42	1.05
Diarrhœal Diseases	M..	2.08	85.40	13.33	0.83	0.31	0.15	18.02	0.06	0.07	0.03	0.06	0.11	0.18	0.54	1.26	1.89	5.06
	F...	1.66	60.18	15.70	1.13	0.15	0.33	15.27	0.09	0.03	0.06	0.02	0.10	0.31	0.21	1.40	1.77	5.33
	P...	1.86	72.05	14.43	0.98	0.23	0.24	16.66	0.08	0.05	0.05	0.04	0.10	0.24	0.36	1.34	1.82	5.26
Diphtheria	M..	1.32	4.80	13.33	9.02	8.68	7.91	8.63	3.06	0.75	0.13	0.01	0.06	0.03	.....	.....	.....	.....
	F...	1.15	2.21	14.31	10.82	8.09	7.80	8.33	3.03	0.61	0.06	0.02	.....	0.02	.....	.....	.....	.....
	P...	1.23	3.43	13.79	9.91	8.38	7.86	8.48	3.05	0.68	0.10	0.02	0.03	0.02	.....	.....	.....	.....
Fever, Scarlet	M..	0.22	0.88	3.23	1.38	1.08	1.36	1.52	0.48	0.07	0.03	0.01	.....	.....	.....	.....	.....	.....
	F...	0.23	0.63	3.23	1.85	2.44	1.18	1.79	0.53	0.03	0.03	0.02	0.02	.....	.....	.....	.....	.....
	P...	0.23	0.75	3.23	1.61	1.76	1.28	1.65	0.51	0.05	0.03	0.02	0.01	.....	.....	.....	.....	.....
Fever, Typhoid	M..	0.33	0.17	.....	.....	.....	0.15	0.06	0.19	0.21	0.37	0.59	0.49	0.27	0.24	0.09	0.21	.....
	F...	0.32	.....	0.46	0.14	0.45	0.16	0.23	0.15	0.61	0.68	0.43	0.24	0.19	0.08	0.13	0.14	.....
	P...	0.32	0.08	0.21	0.07	0.23	0.16	0.14	0.17	0.41	0.52	0.50	0.35	0.23	0.16	0.11	0.17	.....
Influenza	M..	0.01	.....	.....	.....	.....	.....	.....	.....	.....	. ....	0.01	0.02	0.03	0.09	.....	.....	.....
	F...	0.02	.....	0.23	.....	.....	.....	0.03	.....	.....	.....	0.01	.....	0.02	0.08	.....	0.29	.....
	P...	0.01	.....	0.10	.....	.....	.....	0.01	.....	.....	.....	0.01	0.01	0.02	0.09	.....	0.17	.....
Measles	M..	0.14	1.60	3.83	0.97	0.46	0.15	1.26	0.13	.....	.....	.....	0.02	.....	.....	.....	.....	.....
	F...	0.13	1.57	3.00	0.99	0.30	0.16	1.09	0.22	0.03	.....	0.01	0.02	.....	.....	.....	.....	.....
	P...	0.14	1.58	3.44	0.98	0.38	0.16	1.18	0.17	0.01	.....	0.007	0.02	.....	.....	.....	.....	.....
Small-pox	M..	0.003	.....	.....	.....	.....	.. ...	.....	.....	.....	.....	0.01	.....	.....	.....	.....	.....	.....
	F...	.....	.....	.....	.....	. ....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	P...	0.001	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.007	.....	.....	.....	.....	.....	.....
Whooping-cough	M..	0.18	6.22	2.62	0.41	0.15	0.30	1.75	0.03	.....	.....	.....	.....	.....	.....	.....	.. ..	.....
	F...	0.15	3.47	3.23	1.28	.....	0.33	1.56	0.06	.....	.....	.....	.....	.....	.....	.....	.....	.....
	P...	0.16	4.76	2.90	0.84	0.07	0.32	1.65	0.04	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pneumonia and Bronchitis	M..	2.48	33.98	14.54	3.75	2.32	1.52	10.23	0.55	0.28	0.54	0.64	1.09	2.02	3.16	5.42	10.94	54.43
	F...	2.41	25.75	16.62	2.70	1.98	1.52	9.16	0.60	0.23	0.78	0.74	0.92	1.46	2.36	6.55	13.29	27.18
	P...	2.44	29.62	15.51	3.23	2.15	1.52	9.70	0.57	0.26	0.66	0.69	1.00	1.74	2.73	6.06	12.32	34.73
Diseases of Heart	M..	1.03	4.62	0.40	.....	0.15	.....	0.94	0.09	0.46	0.27	0.37	0.82	0.93	2.22	5.05	9.89	17.72
	F...	1.14	2.52	0.23	.....	0.15	0.16	0.63	0.25	0.37	0.23	0.31	0.96	1.24	2.70	4.14	9.30	9.70
	P...	1.09	3.51	0.32	.....	0.15	0.08	0.78	0.17	0.41	0.25	0.34	0.89	1.09	2.48	4.53	9.54	11.92
Diseases of Brain and Spinal Cord	M..	2.33	31.49	11.31	5.13	2.48	2.13	9.74	1.01	0.42	0.40	0.37	0.53	1.36	2.52	7.49	17.05	30.37
	F...	1.97	17.69	16.62	3.98	2.29	2.37	8.00	0.79	0.20	0.40	0.23	0.46	0.81	2.10	4.94	14.77	27.18
	P...	2.14	24.18	13.79	4.57	2.38	2.24	8.88	0.89	0.31	0.40	0.30	0.49	1.08	2.29	6.03	15.71	28.07
Diseases of Kidneys	M..	0.62	.....	.....	0.27	.....	0.15	0.09	0.06	0.10	0.06	0.24	0.46	1.06	1.58	4.06	3.57	10.12
	F...	0.50	0.31	0.23	.....	0.15	.....	0.13	0.25	0.10	0.03	0.34	0.44	0.81	0.94	1.60	2.80	2.91
	P...	0.56	0.16	0.10	0.14	0.07	0.08	0.11	0.16	0.10	0.05	0.29	0.45	0.93	1.24	2.65	3.12	4.91
Suicide	M..	0.10	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.08	0.13	0.15	0.39	0.45	0.42	.....
	F...	0.03	.....	.....	.....	.....	.....	.....	.....	.....	0.03	0.04	0.08	0.02	0.08	0.06	.....	.....
	P...	0.07	.....	.....	.....	.....	.....	.....	.....	.....	0.01	0.06	0.10	0.08	0.22	0.23	0.17	.....
All other causes	M..	5.28	104.44	13.53	4.58	1.86	2.43	23.22	1.46	1.25	1.08	1.21	1.85	3.05	5.99	10.84	27.78	121.51
	F...	5.1	79.77	18.70	4.13	1.83	1.86	21.18	1.20	0.78	0.95	1.60	2.76	2.76	4.55	9.55	21.56	90.77
	P...	5.2	91.38	15.94	4.36	1.84	2.16	22.21	1.33	1.01	1.02	1.41	2.33	2.90	5.22	10.10	24.13	99.29

Marriage-rate per 1,000 living: 10.14.

Birth-rate per 1,000 living: M = 29.48, F = 26.27, P = 27.81

Still-births per 100 births: M = 4.73, F = 3.59, P = 4.17

THE KEY.

A rise in the rate is indicated by +; a fall by −; no change by =; no death in either decade by .....

		All Ages.	0-1	1-2	2-3	3-4	4-5	0-5	5-10	10-15	15-20	20-30	30-40	40-50	50-60	60-70	70-80	Over 80
All Causes	M..	−	+	−	−	−	−	−	−	+	+	+	+	+	+	+	−	+
	F...	−	−	+	−	−	−	−	−	−	+	−	−	−	+	+	+	−
	P...	−	+	−	−	−	−	−	−	−	+	−	−	+	+	+	−	−
Cancer	M..	+	−	.....	.....	.....	.....	−	+	.....	+	+	+	+	+	+	+	+
	F...	+	.....	.....	.....	.....	.....	.....	−	.....	+	=	−	−	+	+	+	+
	P...	+	−	.....	.....	.....	.....	−	−	.....	+	=	+	+	+	+	+	+
Cerebro-Spinal Meningitis	M..	−	−	−	−	−	+	−	−	+	−	−	−	−	.....	−	.....	.....
	F...	−	−	−	−	−	−	−	−	−	−	+	.....	−	.....	.....	.....	.....
	P...	−	−	−	−	−	+	−	−	+	−	−	−	−	.....	−	.....	.....
Consumption	M..	+	+	−	−	+	−	−	+	+	+	+	+	−	−	−	−	−
	F...	−	−	−	−	+	−	−	+	+	+	−	+	+	−	−	−	−
	P...	=	−	−	−	+	−	−	+	+	+	+	+	−	−	−	−	−
Diarrhœal Diseases	M..	−	+	−	−	−	−	−	−	−	−	−	−	+	−	+	+	−
	F...	−	−	−	−	−	−	−	−	+	+	−	−	−	−	−	−	−
	P...	−	−	−	−	−	−	−	−	−	+	−	−	−	−	−	−	−
Diphtheria	M..	+	+	+	+	+	+	+	+	+	+	−	−	−	−	.....	.....	.....
	F...	+	−	+	+	+	+	+	+	−	+	−	−	+	.....	.....	.....	.....
	P...	+	−	+	+	+	+	+	+	+	+	−	−	−	−	.....	.....	.....
Fever, Scarlet	M..	−	−	−	−	−	−	−	−	−	+	−	−	.....	.....	.....	.....	.....
	F...	−	−	−	−	−	−	−	−	−	−	−	+	−	.....	.....	.....	.....
	P...	−	−	−	−	−	−	−	−	−	−	−	−	−	.....	.....	.....	.....
Fever, Typhoid	M..	−	+	−	.....	−	−	−	−	+	−	+	+	+	−	−	−	−
	F...	−	.....	+	−	+	−	+	−	+	+	+	−	=	−	+	−	.....
	P...	−	+	+	−	−	−	−	−	+	−	+	+	+	−	−	−	−
Influenza	M..	+	.....	.....	.....	.....	.....	.....	.....	.....	.....	+	+	+	+	.....	.....	.....
	F...	+	.....	+	.....	.....	.....	+	.....	.....	.....	+	.....	+	+	.....	+	.....
	P...	+	.....	+	.....	.....	.....	+	.....	.....	.....	+	+	+	+	.....	.....	.....
Measles	M..	+	+	+	+	−	−	+	+	.....	.....	.....	+	.....	.....	.....	.....	.....
	F...	+	+	+	+	+	−	+	+	−	.....	+	+	.....	.....	.....	.....	.....
	P...	+	+	+	+	−	−	+	+	−	.....	+	+	.....	.....	.....	.....	.....
Small-pox	M..	−	−	−	.....	.....	−	−	−	−	−	−	−	−	.....	−	.....	.....
	F...	−	−	−	.....	.....	−	−	−	.....	.....	−	−	.....	−	.....	−	.....
	P...	−	−	−	.....	.....	−	−	−	−	−	−	−	−	−	−	−	.....
Whooping-cough	M..	=	+	+	−	−	+	+	−	.....	.....	.....	.....	.....	.....	.....	.....	.....
	F...	−	−	−	+	−	+	−	+	.....	.....	.....	.....	−	.....	.....	.....	.....
	P...	−	−	+	+	−	+	−	=	.....	.....	.....	.....	−	.....	.....	.....	.....
Pneumonia and Bronchitis	M..	+	+	+	+	+	+	+	−	+	+	+	+	+	+	+	−	+
	F...	+	+	+	−	−	−	+	+	−	+	−	+	+	+	+	+	+
	P...	+	+	+	−	+	−	+	−	−	+	=	+	+	+	+	+	+
Diseases of Heart	M..	+	+	+	.....	−	.....	−	−	+	+	+	+	+	+	+	+	+
	F...	+	−	+	.....	+	−	−	+	−	+	+	+	+	+	+	+	+
	P ..	+	−	+	.....	−	=	−	−	+	+	+	+	+	+	+	+	+
Diseases of Brain and Spinal Cord	M..	+	+	−	−	+	+	+	+	+	+	+	+	+	−	−	+	+
	F...	+	+	+	−	+	+	+	−	−	+	−	+	+	+	+	+	−
	P...	+	+	+	−	+	+	+	−	−	+	+	+	+	+	+	+	−
Diseases of Kidneys	M..	+	−	−	+	−	+	−	+	+	−	+	+	+	−	+	−	+
	F...	+	+	+	.....	+	.....	+	+	+	−	+	+	+	+	+	+	+
	P...	+	−	−	+	−	+	−	+	+	−	+	+	+	+	+	+	+
Suicide	M..	+	.....	.....	.....	.....	.....	.....	.....	.....	.....	−	+	+	+	+	+	.....
	F...	+	.....	.....	.....	.....	.....	.....	.....	.....	.....	+	−	+	−	+	+	.....
	P...	+	.....	.....	.....	.....	.....	.....	.....	.....	.....	+	−	=	+	+	+	.....
All other causes	M..	−	+	−	+	−	+	−	−	−	+	−	−	−	+	−	−	−
	F...	−	−	+	−	−	−	+	+	−	+	−	−	−	+	−	−	−
	P...	−	+	+	−	−	−	+	=	−	+	−	−	−	+	−	−	−

Typhoid Fever.—At all ages all the rates fell, though the changes were slight. The male rate rose at 0–1, 10–15, 20–50, and the female at 1–2, 3–4, 10–30, 60–70.

Influenza.—At all ages, and at all age periods wherein deaths occurred, all the rates rose.

Measles.—At all ages all the rates rose. The male rate fell at 3–5 and rose at all other periods. The female rate fell at 4–5, 10–15, and rose at the others.

Small-pox.—In the first decade there were 63 deaths, 41 males and 22 females, from this disease, and in the second decade one death, that of a male.

Whooping-cough.—At all ages the general and also the female rate fell, while the male remained unchanged.

Diseases of the Brain and Spinal Cord.—At all ages all the rates rose. The male rate rose in 11 and fell in 4 age periods. The female rose in 9 and fell in 6.

Diseases of Kidneys.—At all ages the male rate rose from 0.40 to 0.62, an increase of 55 %. The female rate rose from 0.26 to 0.50, an increase of 92 %.

Suicide.—At all ages all the rates rose. The male from 0.06 to 0.10, or 66 %; the female from 0.01 to 0.03, or 200 %. In the first decade all the female suicides occurred in the age periods 20–30 and 40–50. In the second decade they occurred in every age period from 15–70.

EDWIN FARNHAM, M.D.

REPORT OF INSPECTOR OF MILK

To His Honor the Mayor and the City Council of the City of Cambridge : —

GENTLEMEN : — I have the honor to present the report of the Department of Milk Inspection for the year ending November 30, 1898.

The milk law has not been altered this last year, and the work of this department in enforcing it has been carried on in the same manner as heretofore. In spite of the complaints of milk dealers in regard to the stringency of the law, and although it doubtless might be greatly abused if some of its provisions were unscrupulously enforced, I think the final effect on the quality of the milk supplied is extremely good. It is true that if a milk man is so unfortunate as to have some cans of milk on his wagon which are not of as good quality as the law calls for, he is liable to a fine, even though he may be entirely innocent of any intent to deceive his customers, the milk being just as it was sold to him by the farmers or contractors. In the same way when milk is sold from a store the proprietor is responsible if it proves to be not of good standard quality — no matter whether the fault lies with the milkman who has left poor milk originally, or with the clerk who has neglected to keep the can well shaken up, and so has sold off most of the cream with the first few pints of milk; even if the can was left outside the door early in the morning and some person has stolen the cream and refilled the can with an equal amount of water, the proprietor is liable, just as if he had done it himself. The law really compels every person dealing in milk to insure its quality and suffer the consequences if it proves not to be good. But as a matter of fact all milk dealers know that the law makes them responsible for the quality of milk found in their possession, and for the most part they take the necessary precautions to be sure it is of good quality. Sometimes a man may be fined who has really done his best to get and sell milk of first-rate quality, but the more I see of the milk business the less common I think such cases really are. I cannot allow that the proprietor of a store has done his best to secure good milk, when he has screwed the price down to such a figure as to enable him to retail it for three or four cents a quart; a moment's thought must show him that if he pays the milkman no more than the milk costs at the railroad, or even less, the chance of his getting it of first-rate quality is rather small. Some proprietors I know pay the milkman a fair price and then retail the milk at a loss, for an advertisement, I am told, and some such men seem to think that as they sell at a loss they should receive especial consideration if the milk is not up to the standard. It has always seemed to me, however, that as the milk is sold with the avowed purpose of attracting people by its cheapness, and is always said to be of first-rate quality, that it is even more necessary for it to be of good quality than when sold for the ordinary price.

Many stores have of late years adopted the practice of delivering milk to their customers, either alone or with other articles; some even putting several large eight-quart cans of milk on the wagon when going around in the morning for orders, and selling a quart here and there as called for when orders are taken. It seems to me that the ordinary store license which is paid for but once and is good ever after, is not intended to cover this kind of business, but that a regular annual license such as milkmen take out is required, and with this in view the following notice was sent last spring to all the stores in which milk is sold, some three or four hundred in number.

CITY OF CAMBRIDGE,
OFFICE OF THE INSPECTOR OF MILK.

Special notice is drawn to the following section of the milk law:

"Every person who conveys milk in carriages or otherwise, for the purpose of selling the same, shall annually be licensed by the Inspector, and shall pay to such Inspector fifty cents for the use of the City. ——— Each licensee shall before engaging in the sale of milk cause his name, the number of his license and his place of business to be legibly placed on each outer side of all carriages used by him in the conveyance and sale of milk. ——— Whoever without being first licensed sells milk or exposes it for sale from carriages or other vehicles, or violates any of the provisions of this section, shall be punished by a fine of not less than thirty nor more than one hundred dollars."

This section applies to delivering milk to customers with groceries or provisions, and any one delivering it in this way must comply with the regulations. These regulations will hereafter be strictly enforced.

F. A. DUNBAR,
Inspector of Milk.

This rule is now held to apply to the delivery of milk to a customer from a store, unless the milk is bought by the customer at the store, and is sent to his address after its sale the same as any other purchase might be sent, and in this case it must be put up in a can or jar of suitable size for delivery; that is, if several customers living close together each buy a quart of milk at a store, the dealer may deliver the milk if put up in separate cans in the store, without taking out an annual license; but he cannot in order to save trouble put a large can of milk on his team and peddle out a quart from this can to each of these customers when the rest of their orders are delivered; nor can he take a general order to leave a quart of milk at a certain address every morning, without taking out an annual license for the sale of milk. Quite a number of stores took out such a license after the receipt of this notice.

There is one form of milk adulteration to which I am at present unable from lack of time and money, to pay any attention, namely, the addition of preservatives to prevent spoiling, especially during warm weather. I consider this a very important omission in the work of milk inspection, not so much from any injury worked by the preservative itself, as owing to the fact that it makes less necessary the scrupulous care and cleanliness in the handling of milk during its transit from the cow to the consumer, which is absolutely essential if milk to which no preservative has been added is to be kept from turning sour. In order to deliver milk to the consumers, during warm weather, sweet and in good condition so that it shall not sour a few hours

after its arrival, it must, unless a preservative is added, be kept clean and be at once cooled off as soon as milked; and if the proper care is taken, milk from points a hundred miles away can be delivered in the city, even during hot weather, and still keep sweet twelve or twenty-four hours after the consumer gets it. Now the addition of a preservative will keep a dirty milk sweet for this length of time or even longer, and so takes away from the consumer one of his greatest safeguards. No customer will long deal with a milkman if the milk spoils a few hours after it is delivered, as will be the case with dirty milk; but if the milkman puts a little preservative into such milk before delivering it, it will keep sweet and apparently good as long or even longer than clean milk to which nothing has been done.

The danger of using dirty milk, at any rate without previous boiling, has been brought so much to public attention of late years, that I suppose it is unnecessary to do more than mention some of the epidemics of typhoid fever which have been traced to the use of such milk; the various forms of bowel trouble which it causes during warm weather, even among adults, and the immense amount of sickness and death which occurs among children every summer, a large amount of which is due to the use of dirty and one-half spoiled milk. The addition of a preservative to such milk while it does not in the least diminish the danger of using it, as I have before said, takes away from the consumer one of the principal means of detecting it, and owing to the length of time it takes such milk to turn sour makes it appear of particularly good quality. Considered as a matter of Public Health I think the use of dirty milk is far more dangerous than the use of skimmed or watered milk; the use of the latter only affects the consumer's pocket while the use of the former may cause sickness or death.

Although the proper enforcement of the law against the use of preservatives would of course not remove all the dirty milk from the market, I think it would have an extremely beneficial effect on the quality of the milk offered for sale, as regards cleanliness and general freedom from injurious foreign substances. In order to enable me to make a proper examination of the City's milk supply for preservatives, an addition of three or four hundred dollars to the present appropriation would be necessary, an increased expense which would, I am sure be many times made up in the end; just as the amount of the present appropriations is saved to the consumers many times over each year. On looking over the milk analyses made twelve years ago, I think it is no exaggeration to say that to the whole quantity of milk brought into the City at that time, about twenty-five per cent of water had been added by the time it finally reached the consumer. While at present though there is doubtless a small amount of adulteration still practiced, the amount of water paid for as milk is a very small fraction of the amount paid for at that time, while the price of milk is about one cent a quart lower than formerly. When the value of the whole milk supply of the City is considered, this means an annual saving to the consumers of many thousand dollars. The following table shows this improvement in the City's milk supply to a certain extent, but makes the improvement less apparent than it really is, owing to the fact that the milk law is now more strictly enforced than was possible at that time; many samples of milk which would then have been found as nearly up to the standard and therefore not subjected to a full analysis, are now analyzed and often found to be below the standard.

	1886.	1898.
Number of milk samples collected . .	731	4,552
Passed as of standard quality . . .	503	4,094
Below standard	228, or 31.2%	458, or 10.06%
Number containing less than 12.50% of milk solids	137, or 18.7%	162, or 3.5%
Number containing less than 11.00% of milk solids	46, or 6.3%	19, or 0.4%

It should also be said in regard to this table that in collecting milk samples there is a constant tendency for them to be of better quality than the average, and that while as the result of experience in collecting them I think the figures for 1898 represent about the average quality of milk now sold, I am very sure that those for 1886 make the average far too high. With the present system of milk collection, the percentage of samples below the standard at that time would have been nearly double what the figures show.

The work of vinegar inspection was carried on this year the same as formerly. But very few of the samples of vinegar sold as cider vinegar were found not to conform to the cider vinegar standard, both in the amount of solid and in acidity; while the samples sold as vinegar, or, as it is often called, standard vinegar, are almost always found to be of very nearly the proper acidity, and to be free from adulterations with the mineral acids.

The number of vinegar samples is necessarily rather small, but enough to form a fair idea of what is sold. The only fraud practised on the public, is probably the substitution of vinegar for cider vinegar when the latter is called for, but as the price of both kinds is about the same there is not much temptation for the substitution.

All the samples of butter examined this year have proven to be genuine; most of them were collected from stores, the rest from butter teams, so that I am obliged to conclude that the amount of oleomargarine sold here cannot be large. It certainly is not kept to any extent in the stores, as I have been unable to find any there for the last two years.

It may be carried to a slight extent on some of the teams, as with the limited means at my disposal I find it impossible to keep a sufficient watch over them to be able to speak with certainty, but whenever one is examined no oleomargarine is found. The penalty for selling oleomargarine colored to look like butter is very heavy, a fine of not less than one hundred dollars, and as there is a U. S. revenue tax of ten cents a pound on it to start with, it is probable that most dealers find the margin of profit too small to make it worth while to run the risk of handling it. Almost no one will use uncolored oleomargarine, which is the only kind which can be legally sold in this State, as it looks almost exactly like lard.

The annual appropriation for this department was fifteen hundred dollars this year instead of sixteen hundred as for the year before, owing to the fact that the examination of samples of ice was turned over to the Board of Health. The manner in which this money has been spent and the amount of work done by this department is shown in the following table:—

Appropriation		$1,500 00
Salaries	$1,320 00	
Paid for milk and butter samples	69 97	
" " car tickets	10 00	
" " printing	27 48	
" " stationery, etc.	16 72	
" " chemicals and incidentals	55 39	
Unexpended balance	44	
		$1,500 00

Number of annual milk licenses	191
" store " "	149
Amount collected from licenses	$170.00
Total number of samples collected	4,736
" " milk samples collected	4,552
" " vinegar " "	103
" " butter " "	81
" " milk samples below standard	458
" " vinegar " " "	15
" " butter samples not genuine butter	0
" " warnings sent for sale of poor milk	268
" " " " " " " vinegar	9
" " complaints entered	7
" " convictions	7
Amount of fines imposed	$310.00

Respectfully submitted,

FRANK A. DUNBAR, M.D.,
Inspector of Milk.

REPORT OF OVERSEERS OF THE POOR

CENTRAL SQUARE BUILDING,
CAMBRIDGE, December 27, 1898.

To the Honorable the City Council of the City of Cambridge: —

GENTLEMEN: — In accordance with the provisions of the City Charter the Overseers of the Poor present their annual report for the year ending November 30, 1898, it being the twenty-first since the organization of the Board in May, 1877.

Mr. Alexander Millan was re-elected by the City Council in March last for the term of five years, he having been a member of the Board since May, 1895.

The calls for relief during the past year have been greater than in former years, owing in part, perhaps, to the confused state of the country in its financial relations caused largely by the uncertain and changing aspects of the contest with Spain. The opportunities for employment have been less and the burdens of the poor greater. It must be expected, however, that the expenditures for the care of the poor will necessarily increase each year as the population of the City increases. The laws of the Commonwealth place upon the Overseers special duties and requirements, and make it obligatory for them to provide for the wants of the destitute classes in their special districts, which duties the city or town government cannot set aside, but must recognize and obey, and which the Overseers of the Poor are bound to carry out regardless of any city or town action. This fact should be carefully borne in mind at all times in the consideration of the estimates for expenses annually submitted to the City Government.

As required by the City Charter the usual estimates for the year were considered and the following appropriations were made for the different branches of this department as follows: —

Outside Aid	$46,500 00
Almshouse	21,000 00
Farm and Ledge	5,250 00
House Offal	26,000 00
Additional appropriation and transfer to Outside Aid	2,850 00
Additional appropriation and transfer to Farm and Ledge	1,200 00
City Physician's salary	1,500 00

The following were the actual expenditures and receipts for the year: —

OUTSIDE AID.

Expenditures	$49,340 51
Receipts	6,591 02
Net cost	$42,749 49

ALMSHOUSE.

Expenditures	$20,962 34
Receipts	1,315 59
Net cost	$19,646 75

FARM AND LEDGE.

Expenditures	$6,309 57
Receipts	7,902 73
Net gain	$1,593 16

CITY PHYSICIAN.

Expenditures	$1,500 00

HOUSE OFFAL.

Expenditures	$25,871 38
Receipts	7,264 09
Net cost	$18,607 29

The following list contains the number of persons at institutions for whose support the City is liable: —

City Almshouse	239
State Insane Hospitals	190
State Almshouse	17
State Hospital for Epileptics	6
New England Industrial School for Deaf Mutes	1
Massachusetts School for Feeble-Minded	10
Lawrence Essex County School	1
Baldwinville Hospital Cottages	2
Number of insane in families	3
	469

The insane hospital cases include seven at the Danvers Insane Hospital, sixty-eight at the Worcester Insane Hospital, fourteen at the Worcester Insane Asylum, one at the Taunton Insane Hospital, twenty-one at the Westboro Insane Hospital, sixteen at the Foxboro Dipsomaniac Hospital, forty-six at the Medfield Insane Asylum, eight in the insane ward at the State Almshouse at Tewksbury, eight in the insane ward at the State Farm at Bridgewater. Three insane women have been boarded out in families, all under the supervision of the State Board of Insanity. There have been twenty-one mildly insane cases at the Cambridge Almshouse, in addition to the number at the insane hospitals supported by the City.

The amount paid to the State insane hospitals and private families for the 199 insane persons during the past year has been $25,876.05, which is $1,833.12 more than the previous year. There were fifty-two of our insane persons at the State insane hospitals fifteen years ago, in 1883, supported at an expense of $6,783.57, and 199 insane persons in 1898 were supported at a cost to the City of $25,876.05. This is at a *less* ratio than in 1883 when compared with our increase in population. The expense for the insane, it will be seen, increases at the rate of nearly two thousand dollars each year, caused by the increasing population, and constitutes more than half of the entire cost of the care of the

poor outside of the Almshouse. In this statement the expense of the care of the mildly insane at the Almshouse is not included and never has been.

The relations and friends of the insane supported by the City have paid $1,322.15 into the City treasury, and other persons have paid $126.45. Other cities and towns have reimbursed the City to the amount of $1,857.54 for aid rendered their poor living in Cambridge. The State treasurer has paid $3,284.88 for the support of cases having no settlement which were aided from the office of the Board.

The population of Cambridge during the past year is estimated to be 89,000, and the total expense of the Outside Aid Department was $49,340.51. The expense of this department in 1883, fifteen years ago, was $14,869.84 and the population was 55,000 in that year. The entire cost of the outside aid in 1883 was $14,869.84, and the cost of the insane that year was $6,783.57, leaving a balance of cost for other expenses of $8,085.27. The entire cost of outside aid in 1898 was $49,340.51, and the cost of the insane that year was $25,876.05, leaving a balance of cost for other expenses of $23,464.46. The insane cost, therefore, has increased $19,092.48 in the last fifteen years, and other expenses have increased $15,379.19.

There have been 569 histories taken of new applicants for relief, and sixty-five histories have been revised; 235 of these families had a settlement in Cambridge, 117 families were settled in other cities and towns, and 282 families had no settlement, as appears from the report of the visitor.

The City Physician has made 1,523 visits upon 221 patients at the Almshouse, and he has also made 2,091 visits upon 711 patients outside of the institution, as seen by his report.

There have been 239 inmates in the Almshouse during the year, and there remained 122 persons on November 30, as appears in the report of the warden to which attention is especially called.

There have been 620 families, embracing 1,860 persons, aided from the office of the Board during the past year; ninety-seven of these families lived in Wards 1 and 5, the population being 27,669. In Wards 2 and 4 there were 350 families relieved, the population being 48,010. In Ward 3 there were 173 families assisted, the population being 13,597. The total population of the City was 89,276, as ascertained from figures furnished from the office of the City assessors.

RECAPITULATION.

Total expenditures for Outside Aid, Almshouse, Farm and Ledge	$76,612 42
Receipts for the same	15,809 34
Net cost of care of the Poor	$60,803 08

ADDITIONAL RECAPITULATION.

Net cost of Poor to the City	$60,803 08
Add profit from Farm and Ledge	1,593 16
Net cost of Poor with gain from Farm and Ledge	$62,396 24
Net expense of Almshouse for the year	19,646 75
Net expense of Insane outside of the Almshouse, as estimated	24,553 90
Amount carried forward	$44,200 65

Amount brought forward	$44,200 65
Net expense of aid to families outside of the Almshouse as estimated	18,195 59
Total net cost of Poor with gain from Farm and Ledge . .	$62,396 24
Deduct gain from Farm and Ledge	1,593 16
Net cost of Poor to the City	$60,803 08
Salary of the City Physician	1,500 00

Respectfully submitted,

WILLIAM W. BURRAGE, *Ward 2*, (*Chairman.*)
ALEX. MILLAN, *Ward 1.*
STEPHEN ANDERSON, *Ward 3.*
CHARLES WALKER, *Ward 4.*
CHARLES BULLOCK, *Ward 5.*

Overseers of the Poor.

REPORT OF THE WARDEN OF THE ALMSHOUSE

CAMBRIDGE, December 1, 1898.

To the Overseers of the Poor:—

GENTLEMEN:—The annual report of the Almshouse for the year ending November 30, 1898, is herewith respectfully submitted.

The whole number in the Almshouse during the year has been as follows:—

Males	137
Females	102
Total	239
Adults	215
Minors	24
Whole number in the Almshouse November 30, 1898	122
Average number during the year	124

Included in the whole number in the Almshouse November 30, 1898, there are:—

INSANE OR DEMENTED.

Males	4
Females	13
Total	17

IDIOTIC OR IMBECILE.

Males	2
Females	1
Total	3

BLIND.

Males	3
Females	2
Total	5

EPILEPTIC.

Males	1
Females	2
Total	3

Included in the whole number discharged during the year are twenty-two persons sent to other institutions, as follows:—

To Cambridge Hospital	1
Care of Children's Aid Society	1
Carney Hospital	2
Home for Destitute Catholic Children	1
Massachusetts School for Feeble-Minded	1

To Massachusetts State Home, Roxbury	1
Middlesex House of Correction	3
State Almshouse, Tewksbury	8
Worcester Lunatic Hospital	4

Remaining in the Almshouse November 30, 1898:—

Males	70
Females	52
Adults	111
Minors — boys, 6; girls, 5	11

Of the boys remaining November 30, 1898, there are:—

Neglected children	2
Dependent children	4
Total	6

Of the girls remaining November 30, 1898, there are:—

Dependent children	5

All statistics which possess a general interest will be exhibited by the following tables:—

Table I.

Showing the number and sex of adult persons and minors of all classes received into the Almshouse in each month of the year ending Nov. 30, 1898.

Months.	Adults.		Minors.		Total.	Dependent Children.		Neglected Children.	
1897.	M	F	M	F		M	F	M	F
December	2	7	1	0	10	1	0	0	0
1898.									
January	5	4	2	2	13	2	2	0	0
February	3	3	0	2	8	0	2	0	0
March	5	0	1	0	6	1	0	0	0
April	12	4	1	0	17	1	0	0	0
May	8	5	0	1	14	0	1	0	0
June	4	3	0	1	8	0	1	0	0
July	5	3	1	3	12	1	3	0	0
August	6	4	1	0	11	1	0	0	0
September	5	4	0	1	10	0	1	0	0
October	2	2	0	0	4	0	0	0	0
November	3	2	1	0	6	1	0	0	0
Totals	60	41	8	10	119	8	10	0	0

Table II.

Showing the number and sex of adult persons and minors of all classes discharged from the Almshouse in each month of the year ending Nov. 30, 1898.

Months.	Adults.		Minors.		Total.	Dependent Children.		Neglected Children.	
1897.	M	F	M	F		M	F	M	F
December	2	3	0	0	5	0	0	0	0
1898.									
January	4	2	0	0	6	0	0	0	0
February	5	3	0	1	9	0	1	0	0
March	6	4	2	2	14	2	1	0	1
April	11	6	0	0	17	0	0	0	0
May	8	5	0	1	14	0	1	0	0
June	5	5	1	1	12	1	1	0	0
July	6	2	1	1	10	1	1	0	0
August	5	4	0	1	10	0	1	0	0
September	6	3	0	0	9	0	0	0	0
October	3	2	1	0	6	1	0	0	0
November	1	3	0	1	5	0	1	0	0
Totals	62	42	5	8	117	5	7	0	1

Table III.

Showing the name, age, time of admission, date and cause of death of each person who has died in the Almshouse during the year ending Nov. 30, 1898.

Names.	Age.	Date of Admission.	Date of Death.	Cause of Death.
Bridget O'Neil	86	Jan. 15, 1884.	Dec. 15, 1897.	Chronic Dementia.
Eliza Garrigan	79	Oct. 29, 1888.	Jan. 2, 1898.	Pulmonary Oedema.
John Farrissee	32	Sept. 27, 1897,	Jan. 3, 1898.	Pulmonary Consumption.
Margaret Jones	44	Dec. 20, 1897.	Feb. 1, 1898.	Pulmonary Consumption.
Daniel Parker	86	June 5, 1897.	Feb. 15, 1898.	Senile Debility.
Owen Carney	82	June 29, 1897.	Feb. 15, 1898.	Chronic Dementia.
William White	66	June 27, 1883.	Feb. 16, 1898.	Pneumonia.
Henry Lannergan	79	May 4, 1896.	Feb. 20, 1898.	Chronic Bronchitis.
Nellie Frazier	..	Feb. 24, 1898.	Feb. 24, 1898.	Premature birth.
Amelia Backus	60	Feb. 28, 1898.	Mar. 12, 1898.	Chronic Nephritis.
Catherine Fee	60	Oct. 16, 1896.	April 11, 1898.	Apoplexy, Paralysis and exhaustion.
Mary Dalton	76	May 4, 1894.	April 16, 1898.	Malignant disease of liver.
William Murphy	38	April 18, 1898.	April 29, 1898.	Pulmonary Consumption.
John Flannigan	50	April 30, 1898.	May 15, 1898.	Pulmonary Consumption.
John D. Swift	47	Sept. 23, 1896	May 22, 1898.	Epilepsy and exhanstion.
John Pike	78	Feb. 15, 1896.	June 6, 1898.	Chronic Bronchitis
William Rehall	66	Oct. 14, 1889.	June 14, 1898	Chronic Bronchitis.
Mary McCoy	64	June 24, 1897.	June 20, 1898.	Pernicious Anæmia.
Thomas McDonald	82	Aug. 4, 1896.	July 13, 1898.	Senile Debility.
Michael Frawley	78	July 30, 1895.	July 29, 1898.	Diarrhœa.
Wallace A. Orcutt	46	July 6, 1898.	July 29, 1898.	Cirrhosis of liver.
Edward J. Hart	56	May 17, 1898.	Sept. 9, 1898.	Heart disease.
James McArdle	35	Dec. 5, 1896.	Sept. 10, 1898.	Pulmonary Consumption.
Helen Hardy	68	June 14, 1896	Sept, 14, 1898.	Chronic Dementia.
Annie Williams	53	Sept. 21, 1898.	Sept. 22, 1898.	Cerebral Hemorrhage.
James Cooper	61	July 19, 1897.	Oct. 20, 1898.	Diarrhœa and exhaustion.

Products of the Farm with their Approximate Values.

550 bushels beans	$490 00
85 bushels beets	30 00
12,000 bunches beets	230 00
50 bushels beet greens	10 00
14,000 cabbages	500 00
400 bushels carrots	160 00
1,900 bunches carrots	30 00
650 boxes celery	1,900 00
24,000 cucumbers	300 00
650 bushels dandelions	380 00
400 dozen eggs	100 00
200 dozen green corn	20 00
2,000 dozen lettuce	500 00
600 bushels onions	370 00
400 bunches parsnips	50 00
350 bushels of parsnips	240 00
1,390 pounds of pie-plant	70 00
25 bushels peas	30 00
5,883 pounds pork	291 37
2,000 dozen radishes	420 00
600 bushels spinach	120 00
8 tons squash	160 00
620 bushels tomatoes	340 00
	$6,741 37

Comparative Table of Almshouse, Farm, Ledge, and House Offal Receipts for Seventeen Years ending November 30, 1898.

Years.	Board.	Chair Shop.	Farm.	General Sales.	Stone.	House Offal.	Totals.
1881	$322 56	.....	$378 50	.....	$2,529 01	$5,536 88	$8,766 95
1882	705 34	.....	436 54	.....	2,626 17	5,705 22	9,473 27
1883	1,174 96	.....	476 22	$14 19	2,622 00	5,819 55	10,106 92
1884	1,480 93	.....	316 76	.....	4,238 77	6,449 96	12,486 42
1885	2,035 58	.....	335 32	149 85	4,509 84	7,354 26	14,384 95
1886	613 93	$37 50	772 14	319 75	5,611 38	6,926 23	14,280 93
1887	514 64	634 19	1,595 10	241 37	4,684 14	6,856 59	14,526 03
1888	557 28	614 94	2,846 52	213 62	6,662 26	6,721 50	17,617 86
1889	274 84	479 28	3,684 59	144 36	5,564 18	7,324 61	17,471 06
1890	302 49	794 36	4,364 03	150 89	5,651 38	7,386 33	18,649 48
1891	1,201 33	844 62	5,213 68	161 71	6,107 86	7,716 77	21,245 97
1892	1,253 06	899 81	5,371 60	166 45	5,220 50	7,535 57	20,447 55
1893	703 70	325 86	6,400 64	210 09	5,826 74	7,033 52	20,500 05
1894	1,094 89	220 07	6,504 66	615 69	7,955 42	8,218 96	24,609 69
1895	622 77	77 00	6,512 63	160 19	8,265 14	9,045 55	24,682 78
1896	834 52	61 25	5,623 67	147 02	7,639 48	9,155 35	23,461 24
1897	1,294 65	3 60	5,348 47	137 33	10,335 16	7,228 79	24,348 00
1898	1,038 19	.....	5,730 13	277 40	2,172 60	7,264 09	16,482 41
Totals	$16,025 16	$4,992 48	$61,911 15	$3,109 91	$98,222 03	$134,279 83	$313,540 56

The large number of deaths in the Almshouse during the past year should have a word of explanation. It is not generally understood how great a proportion of the people received into the Almshouse in each year are hospital patients.

For the last five years about seventy per cent of the adult persons received came for hospital treatment. Of course a considerable number of these are so far restored to health as to be able to care for themselves, and are discharged to resume again their employments in the outside world; but every year's close shows quite a number who have not improved in health and whose recovery is not expected. It is plain therefore, that sooner or later these incurable cases must furnish a higher death rate. Of the twenty-six who died during the past year, fifteen were persons who arrived at the Almshouse in a feeble condition and had never sufficiently recovered to leave the Almshouse for a single day. Of the remaining eleven, six were more than seventy years of age, three died of chronic diseases of many years standing, one of heart disease and one of pneumonia.

Among the men in the Almshouse we sometimes find those who are not strong enough to perform farm work, but who could nevertheless do considerable light work, and who would be more contented and happy if they could be employed. In the summer time such employment is found for a part of the men in preparing vegetables for the market. But during the year many hours could be filled with labor more or less profitable and the cost of maintainance in the Almshouse be slightly reduced, if the right industry could be found. It is therefore suggested that an effort be made to find some employment suited to the physical ability of such men as have been described.

The men's and women's dining-rooms need some alteration and improvements, and should be supplied with better table furnishings. And the piping of the building for steam heating should be thoroughly examined and some alterations made to secure more satisfactory results and greater economy in the use of fuel. The officers and employees in all the departments have given careful attention to their duties, and merit commendation for faithful service.

Respectfully submitted,

MARTIN L. ELDRIDGE, *Warden.*

REPORT OF THE CITY PHYSICIAN

CAMBRIDGE, Mass., December 1, 1898.

To the Honorable the City Council of the City of Cambridge:—

GENTLEMEN:—I have the honor to present the following report of the doings of this office for the year ending November 30, 1898.

ALMSHOUSE.

Number of visits to Almshouse	168
Number of persons treated therein	221
Number of professional visits to same	1,523
Number of births	1
Number of deaths	26
Cost of medicines and surgical appliances	$214.42

OUTSIDE AID.

Number of persons attended by direction of the Overseers of the Poor	711
Number of professional visits to same	2,091
Number examined relative to their sanity	86
Number of certificates of insanity issued	43
Number of births	13
Number sent to hospitals for treatment	17
Number vaccinated	0
Number of deaths	31
Cost of medicines and surgical appliances	$456.56

DEPARTMENTAL SERVICE AND TOTALS.

Number of persons visited at police stations	31
Number of visits to same	33
Number visited for the Soldiers Aid Committee	0
Number of civil service examinations	27
Number of vaccinations by direction of School Committee	436
Total number vaccinated	439
Number of persons examined for legal department	35
Total number of persons receiving professional attention	1,478
Total number of visits to same	4,170
Total number of deaths	57
Total number of certificates of death issued	65
Total amount expended for medicine and surgical appliances	$670.98

Respectfully,

LEWIS L. BRYANT,

City Physician.

REPORT OF THE SCHOOL COMMITTEE FOR 1898

In compliance with Section 142 of the Regulations for the Public Schools, the Superintendent herewith submits his twenty-fourth annual report, it being for the year ending December 31, 1898.

Population of Cambridge.

1875	47,838	1895	81,643
1885	59,658	1898, estimated	89,276

School Census.

Number of children in the city on the first of May, five years old or more, but less than fifteen, as reported by the Truant Officers.

1885	10,957	1895	12,869
1890	11,971	1898	14,036

Schools and Classrooms.

Latin School	1	Classrooms in use	12
English High School	1	" " "	14
Grammar Schools	8	" " "	98
Primary Schools	19	" " "	95
Grammar and Primary Schools	6	" " "	66
Kindergartens	11	" " "	11
Evening Drawing School	2	" " "	5
Evening High School	1	" " "	8
Evening Elementary Schools	4	" " "	17
Whole number of Day Schools			46
Number of Classrooms for Day Schools			296

High Schoolhouses.

Schoolhouses	Number of Classrooms	Estimated Value	Size of Lots, Square Feet	Estimated Value	Total Value
Latin	8	$40,000	37,828	$15,900	$55,900
Lee Street	6	10,000	10,100	5,000	15,000
English High	11	220,000	74,366	18,000	238,000
Total	25	$270,000	122,294	$38,900	$308,900

Grammar Schoolhouses.

Schoolhouses	Number of Classrooms	Estimated Value	Size of Lots, Square Feet	Estimated Value	Total Value
Agassiz*	7	$17,400	19,689	$6,600	$24,000
Allston	12†	30,000	15,193	4,600	34,600
Harvard	16†	44,000	20,494	12,000	56,000
Morse*	14†	73,000	25,650	7,000	80,000
Peabody	6	27,000	21,813	8,000	35,000
Putnam	13†	60,000	14,400	14,300	74,300
Russell*	10†	41,000	33,073	4,000	45,000
Shepard	11	30,000	14,755	7,000	37,000
Sleeper*	8	24,800	21,284	4,200	29,000
Taylor*	10†	38,000	23,592	7,000	45,000
Thorndike	12	30,000	10,027	4,000	34,000
Washington	12†	25,000	14,951	10,000	35,000
Webster	16†	50,000	25,839	9,000	59,000
Wellington*‡	13†	42,000	27,673	8,300	50,300
Total	160	$532,200	288,433	$106,000	$638,200

* Used for grammar and primary grades.
† Also an assembly hall.
‡ On the same lot there is another schoolhouse containing four rooms used for primary classes.

Primary Schoolhouses.

Schoolhouses	Number of Classrooms	Estimated Value	Size of Lots, Square Feet	Estimated Value	Total Value
Boardman	8	$12,000	10,018	$4,500	$16,500
Corlett	2*	3,000	10,000	1,000	4,000
Cushing	2	3,000	14,787	1,500	4,500
Dana	4	2,000	14,317	4,300	6,300
Dunster	4	4,000	10,000	2,000	6,000
Felton	4	6,000	15,090	4,500	10,500
Gannett	5	12,000	15,434	3,000	15,000
Gore	12	25,000	9,900	4,000	29,000
Holmes	4†	6,000	11,182	4,500	10,500
Lassell	4	8,000	10,000	2,500	10,500
Lowell	4	7,000	12,033	2,500	9,500
Otis	8	12,000	8,270	4,000	16,000
Parker	6	19,000	12,329	7,000	26,000
Quincy	2	10,000	8,469	5,000	15,000
Reed	4	4,000	12,000	1,200	5,200
Riverside	4	5,000	11,198	3,000	8,000
Sargent	4	3,000	9,995	4,000	7,000
Stearns	4	3,000	10,050	5,000	8,000
Tarbell	4	8,000	19,500	4,000	12,000
Willard	12	25,000	20,079	5,000	30,000
Wyman	6	6,000	14,347	3,500	9,500
Primary, Total	107	$183,000	258,998	$76,000	$259,000
Grammar, "	160	532,200	288,433	106,000	638,200
High Schools, "	25	270,000	122,294	38,900	308,900
Summary	292	$985,200	669,725	$220,900	$1,206,100

* Used for a kindergarten.
† Used for a manual training school.

Number of teachers in the Day Schools.

[Special teachers are included in the total.]

December	Latin School	English High School	Grammar Schools	Primary Schools	Kindergartens	Total	Normal Graduates
1893	11	19	138	108	13	297	171
1894	12	21	142	114	15	312	191
1895	14	21	146	116	16	322	198
1896	15	21	151	124	17	337	207
1897	16	23	157	127	22	354	219
1898	16	23	161	133	22	364	237

Attendance at all the Day Schools.

Year	Number of Pupils Registered	Average Number Belonging	Average Daily Attendance	Per cent of Attendance
1893	13,107	11,045	10,074	91.2
1894	13,254	11,166	10,322	92.4
1895	13,571	11,505	10,611	92.2
1896	13,992	11,957	11,068	92.6
1897	14,373	12,317	11,397	92.5
1898	15,026	12,907	11,978	92.8

Attendance at the Latin School.

Year	Number of Pupils Registered	Average Number Belonging	Average Daily Attendance	Per cent of Attendance
1893	269	251	236	94.1
1894	319	303	286	94.3
1895	380	354	334	94.3
1896	411	373	351	94.2
1897	387	358	339	94.5
1898	398	362	343	94.7

Attendance at the English High School.

Year	Number of Pupils Registered	Average Number Belonging	Average Daily Attendance	Per cent of Attendance
1893	681	569	549	96.5
1894	691	611	594	97.1
1895	743	648	626	96.7
1896	733	632	611	96.6
1897	714	644	622	96.7
1898	773	685	662	96.7

Attendance at the Grammar Schools.

Year	Number of Pupils Registered	Average Number Belonging	Average Daily Attendance	Per cent of Attendance
1893	5,981	5,206	4,838	92.9
1894	5,934	5,200	4,876	93.8
1895	5,926	5,204	4,888	93.9
1896	6,069	5,439	5,105	93.9
1897	6,318	5,682	5,351	94.2
1898	6,570	5,883	5,548	94.3

Attendance at the Primary Schools.

Year	Number of Pupils Registered	Average Number Belonging	Average Daily Attendance	Per cent of Attendance
1893	5,757	4,666	4,215	90.3
1894	5,815	4,741	4,317	91.1
1895	5,928	4,925	4,499	91.3
1896	6,138	5,117	4,680	91.4
1897	6,308	5,192	4,741	91.3
1898	6,505	5,429	4,984	91.8

Attendance at the Kindergartens.

Year	Number of Pupils Registered	Average Number Belonging	Average Daily Attendance	Per cent of Attendance
1894	495	311	249	80.3
1895	594	374	264	70.6
1896	641	396	321	81.2
1897	646	441	344	78.1
1898	780	548	441	80.4

Number of pupils admitted to the lowest grade of the Latin School.

Course, 5 years.

Year	Boys	Average Age	Girls	Average Age
1892	52	14 years 7 months	32	14 years 7 months
1894	51	14 years 8 months	44	14 years 4 months
1895	54	14 years 6 months	48	14 years 5 months
1896	47	14 years 4 months	54	14 years 6 months
1897	61	14 years 7 months	52	14 years 7 months
1898	49	14 years 8 months	56	14 years 3 months

Number of pupils graduated from the Latin School.

Course, 5 years.

Year	Boys	Average Age	Girls	Average Age
1892	8	17 years 8 months	14	18 years 7 months
1894	15	18 years 11 months	12	19 years 6 months
1895	16	18 years 9 months	9	18 years 11 months
1896	16	18 years 0 months	18	18 years 6 months
1897	21	19 years 1 month	14	18 years 6 months
1898	16	18 years 1 month	27	18 years 3 months

Number of pupils admitted to lowest grade of the English High School.

Year	Boys	Average Age	Girls	Average Age
1892	62	15 years 2 months	168	15 years 3 months
1894	82	15 years 2 months	157	15 years 2 months
1895	55	14 years 9 months	140	15 years 0 months
1896	61	14 years 7 months	131	15 years 2 months
1897	57	14 years 9 months	150	15 years 0 months
1898	60	14 years 8 months	169	15 years 1 month

Number of pupils graduated from the English High School.

Year	Boys	Average Age	Girls	Average Age
1892	15	18 years 3 months	37	18 years 11 months
1894	12	18 years 8 months	53	18 years 7 months
1895	14	18 years 8 months	40	18 years 4 months
1896	12	18 years 7 months	50	18 years 4 months
1897	14	18 years 1 month	56	18 years 9 months
1898	19	18 years 9 months	64	18 years 5 months

Number of pupils admitted to the lowest grade of the Manual Training School, with the number of graduates.

Year	Admitted	Average Age	Graduated	Average Age
1892	85	15 years 3 months	25	18 years 0 month
1894	72	15 years 2 months	26	17 years 10 months
1895	63	15 years 2 months	35	17 years 8 months
1896	59	15 years 6 months	10	18 years 6 months
1897	84	15 years 4 months	20	18 years 6 months
1898	70	15 years 5 months	14	18 years 2 months

Number of pupils graduated from the Grammar and Primary Schools.

Year	Grammar Schools. Course, 6 yrs.	Average Age	Primary Schools. Course, 3 yrs.	Average Age
1893	487	14 years 11 months	1,147	9 years 9 months
1894	563	14 years 11 months	1,159	9 years 8 months
1895	491	14 years 9 months	1,209	9 years 10 months
1896	467	14 years 10 months	1,273	9 years 9 months
1897	521	14 years 11 months	1,292	9 years 9 months
1898	518	15 years 0 months	1,395	9 years 8 months

Length of time in completing the Course of Study in the Grammar Schools.

Year	In 4 years	In 5 years	In 6 years	In 7 years or more
1893	9 per cent	29 per cent	47 per cent	15 per cent
1894	10 per cent	32 per cent	42 per cent	16 per cent
1895	9 per cent	30 per cent	46 per cent	15 per cent
1896	8 per cent	33 per cent	49 per cent	10 per cent
1897	6 per cent	30 per cent	51 per cent	13 per cent
1898	6 per cent	29 per cent	47 per cent	18 per cent

Length of time in completing the Course of Study in the Primary Schools.

Year	In 2 years	In 2½ years	In 3 years	In 3½ years	In 4 years	In 4½ years or more
1894	8 per cent	2 per cent	58 per cent	2 per cent	21 per cent	9 per cent
1895	5 per cent	1 per cent	56 per cent	5 per cent	23 per cent	10 per cent
1896	7 per cent	2 per cent	60 per cent	3 per cent	21 per cent	7 per cent
1897	2 per cent	3 per cent	63 per cent	4 per cent	21 per cent	7 per cent
1898	4 per cent	2 per cent	59 per cent	6 per cent	20 per cent	9 per cent

Number of pupils in all the Day Schools at different periods of the year.

Year	First Day of the First Week	First Day of the Second Week	First Week of October	First Week of the next June
1893	10,692	11,354	11,628	11,532
1894	10,889	11,562	11,847	11,723
1895	11,178	11,894	12,146	12,002
1896	11,580	12,314	12,697	12,569
1897	12,303	13,085	13,281	12,956
1898	12,728	13,473	13,691	

Number of pupils in the Latin School, December, 1898.

Grade	Boys	Girls	Total	Per cent
Fourteenth	17	30	47	.123
Thirteenth	32	31	63	.164
Twelfth	34	39	73	.191
Eleventh	37	44	81	.211
Tenth	58	61	119	.311
Total	178	205	383	

Number of pupils in the English High School and in the Manual Training School, December, 1898.

Grade	Boys	Girls	Total	Per cent
Thirteenth	45 (20)*	56	101	.137
Twelfth	72 (34)*	60	132	.180
Eleventh	99 (61)*	108	207	.281
Tenth	130 (71)*	166	296	.402
Total	346 (186)*	390	736	

* Manual Training School.

Number of pupils in the Grammar Schools, December, 1898.

Grade	Boys	Girls	Total	Per cent
Ninth	271	276	547	.086
D	24	31	55	.009
Eighth	324	392	716	.113
C	68	85	153	.024
Seventh	415	429	844	.133
Sixth	517	527	1,044	.164
B	96	105	201	.032
Fifth	626	575	1,201	.189
A	163	190	353	.055
Fourth	631	612	1,243	.195
Total	3,135	3,222	6,357	

Number of pupils in the Primary Schools, December, 1898.

Grade	Boys	Girls	Total	Per cent
Third	754	798	1,552	.272
Second	845	890	1,735	.304
First	1,217	1,202	2,419	.424
Total	2,816	2,890	5,706	

Number of pupils and teachers in the Kindergartens, 1896, 1897, 1898.

Year	Boys	Girls	Total	Number of Teachers
1896	231	270	501	17
1897	254	329	583	22
1898	265	339	604	22

Number of pupils belonging to the Evening Drawing Schools, with the average attendance.

1893	1894	1895	1896	1897	1898
242	217	212	193	209	182
142	103	117	103	114	99

Number of pupils belonging to the Evening Schools, with the average attendance.

1893	1894	1895	1896	1897	1898
1,085	1,379	1,246	1,128	1,225	1,165
419	542	478	445	448	494

Number of pupils in the Private Schools in Cambridge, including those in the Parochial Schools.

1893	1894	1895	1896	1897	1898
2,376	2,492	2,557	2,518	2,512	2,637

Cost of instruction in the Evening Schools.

Year	Elementary	High	Drawing	Total
1893	$2,124 50	$1,363 00	$1,531 00	$5,018 50
1894	2,293 00	1,396 00	1,175 00	4,864 00
1895	2,427 00	1,422 50	1,255 00	5,104 50
1896	2,104 00	1,321 50	1,110 00	4,535 50
1897	2,086 00	1,274 50	1,060 00	4,420 50
1898	2,324 00	1,439 00	1,091 00	4,854 00

Cost of instruction in the Day Schools.

[Salaries of teachers, superintendent, agent, clerks, and truant officers.]

Year	Number of Teachers, December 1	Average Number of Pupils	Whole cost	Cost per Pupil
1876	176	7,066	$164,818 00	$23 32
1878	173	7,028	136,491 20	19 42
1880	182	7,175	130,371 75	18 17
1882	200	7,898	137,328 55	17 38
1884	216	8,414	152,290 62	18 09
1886	233	9,218	165,277 42	17 92
1888	241	9,756	175,773 80	18 02
1890	263	10,089	190,558 21	18 89
1892	284	10,861	207,144 22	19 07
1893	297	11,045	215,593 12	19 52
1894	312	11,166	228,873 48	20 50
1895	322	11,505	235,811 62	20 50
1896	337	11,957	245,104 01	20 50
1897	354	12,317	255,397 92	20 73
1898	364	12,907	268,182 97	20 78

Cost of the Day Schools.

[The expenditures for new schoolhouses are not included.]

Year	Number of Teachers, December 1	Average Number of Pupils	Whole cost	Cost per Pupil
1876	176	7,066	$200,894 09	$28 43
1878	173	7,028	162,437 77	23 11
1880	182	7,175	153,967 56	21 45
1882	200	7,898	166,230 52	21 04
1884	216	8,414	203,234 56	24 15
1886	233	9,218	207,536 46	22 51
1888	241	9,756	225,408 57	23 10
1890	263	10,089	241,980 84	23 98
1892	284	10,861	266,651 02	24 55
1893	297	11,045	274,053 82	24 81
1894	312	11,166	287,137 37	25 72
1895	322	11,505	299,085 93	26 00
1896	337	11,957	316,090 83	26 44
1897	354	12,317	327,319 90	26 57
1898	364	12,907	345,566 30	26 77

Summary of the School Census as taken by the Truant Officers, May, 1898.

[The statutes make it the duty of the School Committee to ascertain annually the names and ages of all persons between the ages of five and fifteen years belonging in their respective towns and cities on the first day of May.]

Number of children in the city between five and fifteen	14,036
Number in public schools between five and fifteen	11,597
Number in public schools fifteen years old or more	1,458
Number in private schools between five and fifteen	1,680
Number not attending school between five and eight	537
Number not attending school between eight and fourteen	70
Number not attending school between fourteen and fifteen	152
Whole number not attending school between five and fifteen	759
Number in the city between five and six	1,395
Number in the city between eight and fourteen	8,391

Finances.

[For the financial year ending December 1, 1898.]

Cost of instruction in day schools	$268,182 97
Cost of instruction in evening schools	4,854 00
Cost of care and repairs of schoolhouses, day schools	54,746 79
Cost of care and repairs of schoolhouses, evening schools	2,400 00
Cost of text-books and supplies	17,995 07
Expended for incidentals	1,207 09
Expended for care of truants	3,221 58
Expended for flags	212 80
Expended for new Latin schoolhouse	88,937 16
Expended for Roberts schoolhouse, Ward 2	29,083 60
Expended for Ellis schoolhouse, Ward 5	28,780 20
Expended for addition to Peabody schoolhouse, Ward 5	24,541 76
Expended for Taylor schoolhouse, grading and fencing	1,422 45
Expended for furniture for different buildings	1,359 93
Total expenditures for all school purposes	$526,945 40
Deducting from the above the amount received from the Hopkins Fund, $683.27, the tuition of State Wards, $319.50, and for the tuition of non-resident pupils, $1,281.50, the actual cost of the schools to the city is	$524,661 13
Assessed value of real and personal estates, May, 1897	$89,551,090 00
Ratio of expenditures for school purposes to the valuation in 1897	.0059

Statistics taken from the sixty-second annual report of the Secretary of the State Board of Education.

Number of cities and towns: cities, 32; towns, 321	353
Number of public schools	9,863
Number of pupils of all ages in the public schools during the year	456,141
Number of persons over fifteen years of age attending the public schools	44,770
Per cent of attendance based upon the average membership	92
Number of persons employed as teachers in the public schools during the year: men, 1,174; women, 12,029	13,203
Number of teachers who have graduated from normal schools	4,425
Average number of months the public schools have been kept for the entire year	9.3
Number of high schools	261
Number of teachers in high schools	1,384
Number of pupils in high schools	38,133
Amount expended upon the public schools, exclusive of the expense of school buildings	$9,839,579 33
Cost of new schoolhouses, permanent improvements, and ordinary repairs	3,814,070 03
Entire expenditure for public school purposes	$13,653,649 63

State Normal Schools including the State Normal Art School in Boston.

Bridgewater	Principal,	Albert G. Boyden	Students,	274
Fitchburg	"	John G. Thompson	"	113
Framingham	"	Henry Whittemore	"	104
Hyannis	"	W. A. Baldwin	"	55
Lowell	"	Frank F. Coburn	"	140
North Adams	"	Frank Fuller Murdock	"	106
Salem	"	Walter P. Beckwith	"	140
Westfield	"	Charles S. Chapin	"	160
Worcester	"	H. Harlow Russell	"	190
Art School	"	George H. Bartlett	"	284

TABULAR VIEW

December 1, 1898.

Prepared by the Secretary of the School Committee.

[Salaries are to be increased January 1, 1899.]

Names of Schools	Teachers	Salaries	No. of Pupils Dec. 1, 1898
Latin	William F. Bradbury	$3,000	383
	Theodore P. Adams	2,000	
	John I. Phinney	1,700	
	Max Benshimol	1,000	
	Helen M. Albee	950	
	Constance Alexander	850	
	Mary A. Bachelder	800	
	Alice Cary Baldwin	850	
	Mabel L. Chamberlain	900	
	Caroline Drew	950	
	Mary C. Hardy	950	
	Rose Hardwick	850	
	Mabel E. Harris	750	
	Helen W. Munroe	750	
	Lena G. Perrigo	750	
	Jennie S. Spring	950	
	Annie S. Dodge*	500	
English High	Ray Greene Huling	3,000	736
	Edwin L. Sargent	2,000	
	Joseph A. Coolidge	1,500	
	Russell T. Greene, Jr.	950	
	William E. Stark	1,200	
	Grace L. Deering	1,200	
	Helen E. Andrews	750	
	Caroline Close	950	
	Bertha L. Cogswell	950	
	Gertrude H. Crook	800	
	Esther S. Dodge	750	
	Myra I. Ellis	1,000	
	Maud A. Lawson	950	
	Henrietta E. McIntire	950	
	Mary Moulton	950	
	Louisa P. Parker	1,000	
	Lillian C. Rogers	950	
	Caroline A. Sawyer	950	
	Emma A. Scudder	950	
	Florence W. Smith	800	
	Martha R. Smith	950	
	Delia M. Stickney	1,200	
	Alice H. Stratton	750	
	Martha L. Babbitt*	600	
Agassiz Grammar	Maria L. Baldwin	900	137
Agassiz Primary			213
	Edith C. Arey	400	
	Addie B. Byam	520	
	Mary G. Carpenter	620	
	Mary P. Massé	620	

*Secretary and Librarian.

Tabular View — Continued.

Names of Schools	Teachers	Salaries	No. of Pupils Dec. 1, 1898.
Agassiz	Mary A. Parsons	620	
	Grace C. Stedman	520	
	Jennie L. Upham	620	
Allston	Benjamin W. Roberts	2,000	596
	Sara A. Bailey	700	
	Emily R. Pitkin	650	
	Susan M. Adams	620	
	Mary Blair	620	
	Mary M. Brigham	620	
	Evelyn M. Dormer	520	
	S. Alice Fell	620	
	Susan L. Keniston	620	
	Evelyn B. Kenney	620	
	Ada M. Litchfield	620	
	Nina M. Marsh	620	
	S. Agnes Mulloney	620	
	Ida G. Smith	620	
	Caroline M. Williams	620	
Harvard	James S. Barrell	2,000	848
	Arthur B. Webber	1,000	
	Ada H. Wellington	700	
	Margaret B. Wellington	700	
	Anna M. Brown	650	
	Addie L. Bartlett	620	
	Mary F. Emerson	620	
	Frances Fabyan	620	
	Margaret M. Fearns	470	
	Estella J. French	620	
	Eliza S. Getchell	620	
	Annie B. Lowell	620	
	Adeline M. Murphy	620	
	Elizabeth M. Nash	620	
	Laura L. Parmenter	470	
	Louise C. Patterson	620	
	Elizabeth L. Setchell	620	
	Annie M. Street	620	
	Emma F. West	620	
	Hortense O. Young	620	
Morse { Grammar / Primary	Mary A. Townsend	2,000	{ 435 / 212
	Mary E. Towle	700	
	Marcia E. Ridlon	650	
	Elizabeth J. Baldwin	620	
	Marie B. Daniel	620	
	Annie M. Dow	620	
	Lelia F. Drake	620	
	Ida J. Holmes	620	
	Mary E. Leavitt	620	
	Grace H. Manter	520	
	Alice E. May	620	
	Maude R. Pullen	400	
	Emilie F. Richardson	620	
	Mary E. Sawyer	620	
	Lucy M. Soulée	620	
	Gertrude D. Sprague	620	
Peabody	Frederick S. Cutter	2,000	307
	Addie F. Cleary	700	

Tabular View — Continued.

Names of Schools	Teachers	Salaries	No. of Pupils Dec. 1, 1898
Peabody	Susan Allison	$620	
	Anna F. Bellows	620	
	Charlotte A. Ewell	620	
	M. Lizzie Hewitt	620	
	Effie A. Perkins	520	
	Alice M. Tufts	570	
Putnam	Thomas W. Davis	2,000	604
	Frederick B. Thompson	1,200	
	Eliza M. Hussey	700	
	Henriette E. de Rochemont	650	
	Mary A. Carmichael	620	
	Anna L. P. Collins	620	
	Sarah M. Grieves	620	
	Hattie L. Jewell	620	
	Annie B. Josselyn	620	
	Louise A. Keeler	620	
	Marcia L. Marple	470	
	Anna E. Macmaster	400	
	Eliza S. Paddack	620	
	Louise A. Stickney	620	
	Annie A. Trelegan	620	
Russell Grammar	Arthur C. Wadsworth	1,800	298
Russell Primary			83
	Alice G. Teele	700	
	Carrie J. Allison	520	
	Fannie P. Browning	620	
	Mary A. Connelly	470	
	Alice V. Currier	620	
	Edna W. Hodgkins	570	
	H. Maud McLean	570	
	Gertrude E. Russell	470	
	Loretta L. Shaw	570	
Shepard	Edward O. Grover	2,000	505
	Nellie A. Hutchins	700	
	Caroline L. Blake	700	
	Helen W. Metcalf	650	
	Emma A. Faulkner	620	
	Harriet Foster*	620	
	Lottie L. Griswold	620	
	Louise H. Griswold	620	
	Ella M. Horne	620	
	Ellen J. Hunt	620	
	Flora C. Ingraham	620	
	Theresa H. Mahoney	400	
	Mary A. Stephenson	620	
	Grace D. Street	620	
Sleeper Grammar	A. Estelle Ingraham	900	262
Sleeper Primary			139
	Emily Bissell	570	
	Mabel E. Blake	620	
	Mary F. Calnane	620	
	Florence M. Dudley	520	
	Fannie G. Flanders	620	
	Alice M. Gage	570	
	Laura C. Harding	620	

*On leave of absence for study or travel in accordance with the rules of the School Committee.

Tabular View — Continued.

Names of Schools	Teachers	Salaries	No. of Pupils Dec. 1, 1898
Sleeper	Melissa M. Lloyd	$620	
	Evelyn J. Locke	620	
	Blanche C. Trefethen	570	
Taylor { Grammar	Ella R. Avery	900	96
Taylor { Primary			335
	Mary A. Boland	470	
	Bridget T. Boyle	620	
	Anna E. Callahan	620	
	Lillian M. Canty	620	
	Josephine Day	470	
	Margaret E. Fuller	520	
	Kate A. Hegarty	620	
	Cecilia F. Leahy	520	
	Mabel F. Reycroft	620	
Thorndike	Ruel H. Fletcher	2,000	503
	Harriet A. Townsend	700	
	Laura A. Westcott	650	
	Grace W. Fletcher	620	
	Lena S. Frederikson	520	
	Harriet M. Hanson	620	
	Emma A. Hopkins	620	
	Elizabeth G. Hutchison	620	
	Mary E. Nason	620	
	Ellen M. Plympton	620	
	Susan L. Senter	570	
	Abby S. Taylor	620	
	Lydia A. Whitcher	620	
Washington	John W. Freese	2,000	404
	Leila H. Sprague	700	
	Alice P. Fay	650	
	Adelaide D. Billings	620	
	Eldora J. Clark	620	
	Mary L. Ells	620	
	Ellen A. Kidder	620	
	Winifred L. Kinsley	620	
	Emma Penney	620	
	Margaret J. Penney	620	
	Hattie Shepherd	620	
	Mary E. Stiles	620	
	Marianne M. Webb	620	
Webster	John D. Billings	2,000	743
	William D. Tillson	1,000	
	Alice C. Phinney	700	
	Martha N. Hanson	700	
	Ada A. Billings	650	
	Mabel T. Ashley	620	
	Ella E. Buttrick	620	
	Charlotte M. Chase	620	
	Fannie F. Curtis	620	
	Susan I. Downs	620	
	Josephine Hills	620	
	Gertrude I. Hulbert	570	
	M. Josephine Lamprey	620	
	Anna S. Lamson	620	
	Minnie V. Reid	620	
	Sarah E. Rideout	620	
	Harriette E. Shepard	620	

Tabular View — Continued.

Names of Schools	Teachers	Salaries	No. of Pupils Dec. 1, 1898
Webster	Ellen F. Watson	$620	
Boardman	Elizabeth J. Karcher	690	370
	Christine R. Denyven	620	
	Julia E. Dickson	470	
	Isabella M. Duguid	620	
	Myra Hatt	570	
	Grace Morgan	620	
	C. Florence Smith	620	
	Sarah E. Stewart	620	
Cushing	Maude A. Deehan	630	86
	Eva J. Irish	520	
Dana	Georgia E. Martin	640	178
	Jane Macmaster	620	
	Matilda Macmaster	620	
	Marion B. Magwire	620	
	Nellie S. Walker	400	
Dunster	Susan E. Wyeth	645	145
	Mary E. Colby	620	
	Mary A. Doran	620	
	Agnes M. Sheridan	620	
Felton	Florence A. Rogers	640	196
	Marcia R. Bowman	400	
	S. Emma Davis	620	
	Helen E. Hazard	620	
	Carrie H. Smith	620	
Gannett	Mary A. Rady	645	215
	Annie M. Billings	620	
	Anna M. Jones	620	
	Mary McFarlane	470	
	Augusta G. Mirick	620	
Gore	Frances E. Pendexter	710	487
	Charlotte A. Callahan	520	
	Mary L. Dolan	400	
	Katherine L. Dolan	400	
	Minnie A. Doran	570	
	Mary A. Hurley	470	
	Katherine L. McElroy	620	
	Julia G. McHugh	620	
	Mary E. Mulloney	620	
	Anastasia Peters	620	
	Anna Roach	400	
	Jane E. Whoriskey	620	
Lassell	Frances E. Whoriskey	640	171
	Rose V. Collier	620	
	Elizabeth B. Gahm	620	
	Mary E. Whoriskey	570	
Lowell	Eusebia A. Minard	640	115
	Malvina M. Joslin	620	
	Agnes J. McElroy	620	
Otis	Ellen N. Leighton	685	293
	Frances Allen	620	
	Josephine M. Doherty	620	
	Luella M. Marsh	620	
	Emma J. Ross	620	
	Margaret Sullivan	620	
	Ellen C. Walsh	620	
	Kate F. Wellington	620	

Tabular View — Continued.

Names of Schools	Teachers	Salaries	No. of Pupils Dec. 1, 1898
Parker	Mary A. Knowles	$650	220
	Charlotte E. Clapp	620	
	Butella E. L. Conland	520	
	Mattie S. Cutting	470	
	Harriet R. Harrington	570	
	Agnes Marchant	620	
Quincy	Lucy C. Wyeth	630	108
	Eva G. Oakes	470	
Reed	Margaret T. Burke	640	184
	Margaret M. Brosnahan	470	
	Jennie R. Marsh	620	
	Julia A. Robinson	620	
Riverside	Elizabeth A. Tower	640	146
	Amanda M. Alger	620	
	Mary A. Burke	620	
Sargent	Mary A. Brown	645	253
	Christina D. Barbey *	620	
	Lucy M. Fletcher	620	
	Elmira F. Hall	620	
	Ella M. Leaver	620	
	Marion Prescott	400	
Stearns	Fannie E. Higgins	640	217
	Maria J. Bacon	620	
	Ellen A. Cheney	620	
	Eva A. Taylor	620	
	Hattie A. Thayer	400	
Tarbell	Emma J. Young	640	206
	Florence J. Alley	620	
	Sadie E. Meacham	620	
	Carrie P. Pierce	620	
	Clara W. Ruggli	400	
Willard	Amelia Wright	710	494
	Sally N. Chamberlain	620	
	M. Elizabeth Evans	620	
	Ella F. Gulliver	620	
	Julia S. Gushee	620	
	Mary E. G. Harrington	620	
	Louise W. Harris	620	
	Katherine M. Lowell	620	
	Belle Menard	620	
	Eliza D. Watson	620	
	Grace R. Woodward	620	
	Laura Wright	620	
Wyman	M. Carrie Dickman	650	317
	Mary E. Bassett	620	
	Addie M. Bettinson	620	
	Mary H. Brooks	470	
	Georgianna P. Dutcher	620	
	Genevieve S. Flint	620	
	Mary M. Gilman	620	
Wellington { Grammar... / Primary....	Herbert H. Bates	2,500	{ 619 / 323
	Sarah J. Gunnison	800	
	Margaret Kidd	800	
	Mary I. Vinton	800	
	Carrie H. Stevens	700	

*On leave of absence for study or travel in accordance with the rules of the School Committee.

Tabular View — Continued.

Names of Schools		Teachers	Salaries	No. of Pupils Dec. 1, 1898.
Wellington		Emma M. Taylor	$620	
		Training Class	4,500	
Kindergartens	Boardman	Mary B. Pratt	570	53
		Caroline F. Carrick	480	
	Corlett	Sarah S. Wells	620	40
		Annie M. Dodd	440	
	Dunster	Clara A. Hall	620	58
		Caroline A. Wolcott	480	
	Gannett	Gertrude M. Gove	620	52
		Carrie E. Shepherd	480	
	Gore	Selma E. Berthold	620	60
		Jennie S. Clough	440	
	Lowell	Melinda Gates	620	44
		Margaret L. Voorhees	440	
	Moore Street	Harriette E. Ryan	620	50
		Leonice S. Morse	440	
	Riverside	Helen I. Hutchison	620	64
		Edith L. Lesley	440	
	Sleeper	Mabel S. Adams	620	62
		Julia L. Frame	400	
	Taylor	Mary F. Leland	620	61
		Caroline A. Leighton	480	
	Willard	Ellen A. Watson	620	60
		Alice V. McIntire	440	

Teacher of Botany	Sarah E. Brassill	$1,000
Teacher of Gymnastics	Mabel L. Cummings	600
Teachers of Sewing	Agnes Gordon	600
	Alice H. Nay	600
	Nancy T. Dawe	420
Director of Music	Frederick E. Chapman	2,000
Director of Drawing	Peter Roos	1,800
Assistant in Drawing	Lucia N. Jennison	800
Special Primary Teacher	Mary A. Lewis	1,100
Superintendent	Francis Cogswell	3,000
Agent	Sanford B. Hubbard	2,000
Clerks	Althea B. Frost	700
	Myrta E. Smith	500
Porter	John H. Lemon	500
Truant Officers	Lucian S. Cabot	900
	John Carmichael	900
	Jeremiah Murphy	800
	William H. Porter	900

The Post Office addresses of the several schools are as follows:

Cambridge — Latin, English High, * Corlett, † Peabody, † Washington, ‡ Agassiz, Cushing, Dunster, § Holmes, Lowell, Quincy, Riverside, ‡ Russell, Rindge Manual Training.

Cambridgeport — † Allston, † Harvard, ‡ Morse, † Webster, ‡ Wellington, Boardman, Dana, Felton, Gannett, Parker, Sargent, Stearns, Tarbell, Willard.

East Cambridge — † Putnam, † Thorndike, Gore, Lassell, Otis, ‡ Taylor.

North Cambridge — † Shepard, Reed, ‡ Sleeper, Wyman.

* Kindergarten.
† Grammar grades.
‡ Grammar and primary grades.
§ Manual Training.

Summary.

Number of pupils in Latin School	383
Number of pupils in English High School	736
Number of pupils in Grammar Schools	6,357
Number of pupils in Primary Schools	5,706
Number of pupils in Kindergartens	604
Total	13,786
Number of pupils belonging to Public Schools, Dec. 1, 1897	13,310
Increase of pupils, 1898	476
Increase of pupils, 1897	422
Increase of pupils, 1896	714
Increase of pupils, 1895	250
Increase of pupils, 1894	278
Increase of pupils, 1893	135
Increase of pupils, 1892	210
Increase of pupils, 1891	222
Average annual increase of pupils, from 1880 to 1890 (inclusive)	331

Cost of Instruction.

Latin School	$18,325 00	For each pupil	47 84
English High School	26,051 17	" " "	35 88
Training School	12,771 00	" " "	14 41
Grammar Schools	104,723 55	" " "	18 25
Primary Schools	75,081 30	" " "	13 94
Kindergartens	11,675 95	" " "	19 33
Teacher of Sloyd	270 00		
Teachers of Sewing	1,560 00		
Director of Music	2,000 00		
Directors of Drawing	2,600 00		
Teacher of Botany	760 00		
Teacher of Gymnastics	600 00		
Substitute Teachers	513 00		
Superintendent	3,000 00		
Agent	2,000 00		
Clerks	1,200 00		
Special Teacher in Primary Schools	1,100 00		
Truant Officers	3,452 00		
Porter	500 00		
	$268,182 97	For each pupil	19 45

Cost of instruction in Evening High Schools	$1,439 00
Cost of instruction in Evening Elementary Schools	2,324 00
Cost of instruction in Evening Drawing Schools	1,091 00
	$4,854 00

*The director of drawing is principal of these schools. No part of his salary is included in this amount.

Remarks on the Statistics.

The increase over the last school year in the number of pupils registered is 653; in the average number belonging, 590; in the average daily attendance, 581. In the per cent of attendance there has been an increase of three-tenths of one per cent. The number belonging to the schools in December, 1897, was 13, 310; in December, 1898, 13,786; an increase of 476. The entire cost of the day schools, excluding the expenditures for new schoolhouses and new furniture, exceeds that of last year by $18,246.40, and the cost per pupil by 20 cents. In the entire cost of instruction the increase is $12,785.05, an increase in the cost per pupil of 5 cents.

For several years the cost of the Cambridge schools has been compared with that of the schools in the other cities and towns of the State. The data upon which this comparison has been made has been taken from the annual report of the Secretary of the Board of Education. Were this comparison continued for the year 1898, the results would be of no practical value, as upon January 1, 1899, the cost of the schools will be materially increased, and this will change the relative position of Cambridge among the towns and cities of the State in regard to the amount appropriated for schools according to valuation.

This increase in the cost of the schools for 1899 will be due to an increase in salaries and to the expenditure required for the support of the manual training school which heretofore has been maintained by Mr. Rindge.

Text-Books and Supplies.

At the meeting of the Board in December, the committee on supplies submitted a detailed report of the expenditures of that committee for the year. The report is as follows:—

In accordance with Section 29 of the Rules of the School Board, the Committee on Supplies submit their report for the school year ending July 1, 1898, it being their fourteenth annual report.

Stock on hand July 1, 1897	$3,685 32	
Purchases and expenditures to July 1, 1898	20,213 08	
		$23,898 40
Cash sales and exchanges	466 93	
Delivered to schools, officers, etc.	17,233 94	
		17,700 87
Stock on hand July 1, 1898		$6,197 53

The purchases and expenditures have been:—

For text-books	$7,946 58	
Desk and reference books	532 01	
Copy and drawing books	720 36	
Apparatus and furnishings	2,365 97	
Printing, $177.75; expressage and labor, $322.53	500 28	
Repairing books, $321.70; diplomas, $196.02	517 72	
Tuning pianos	23 50	
Miscellaneous supplies, etc.	7,361 59	
		19,968 01
Less the value of exchanges		107 65
		$19,860 36

The net cost of text-books and supplies is as follows:—

Stock on hand July 1, 1897	$3,685 32	
Bills paid by City Treasurer	19,860 36	
		$23,545 68
Less stock on hand July 1, 1898	$6,197 53	
Cash paid to City Treasurer, sales and damages	466 93	
		6,664 46
We have, net cost of all schools and officers		$16.881 22

or an average cost per pupil of $1.268. The average cost per pupil per annum for fourteen years has been $1.226.

The annual cost per pupil for text-books and supplies since the introduction of the free text-book law is as follows:—

Year	Average cost per Pupil	Year	Average cost per Pupil	Year	Average cost per Pupil
1885	$1.88	1890	$1.334	1895	$1.152
1886	1.17	1891	1.248	1896	1.436
1887	1.051	1892	1.149	1897	1.094
1888	1.068	1893	1.109	1898	1.268
1889	0.96	1894	1.243		

The cost of each grade of schools for text-books and supplies is as follows:

	Net Expense	Average per Pupil				
		1898	1897	1896	1895	1894
High Schools	$3,921 39	$3.555	$3.398	$3.403	$2.925	$3.794
Grammar Schools	4,262 57	.977	1.053	1.527	1.418	1.301
Mixed Schools	4,575 91	1.532	1.105	1.995	1.083	1.264
Primary Schools	2,307 00	.540	.420	.444	.325	.369
Kindergartens	584 87	1.003	.634	.580	.251	.588
Evening Schools	343 48	....	....	....	....	....
Special Teachers	77 25	....	....	....	....	....
Sloyd	394 96	....	....	....	....	....
Officers of Board	72 35	....	....	....	....	....
Incidentals	341 44	....	....	....	....	....
	$16,881 22	$1.268	$1.094	$1.436	$1.152	$1.243

The total expenditures of this year are greater by $5,073.72 than those of last year (which it will be recalled were unusually small), and they exceed by $0.042 the average expenditure per pupil for the fourteen years since the free text-book system was begun.

The increase in the amount spent for text-books is due to the change of several books in the English high school and to the introduction of a new music reader and additional books in the other schools. Fitting up the Sloyd school, additional apparatus for physics, and materials for the introduction of color work in the grammar schools, and the purchase of four pianos, caused a largely increased expenditure under the head of apparatus and furnishings. The opening of the Russell school called for extra expense amounting to over $2,000. Part of the increase of $0.051 per pupil for miscellaneous supplies is due to the expense of the drawing exhibition, to the purchase of blocks for

the English high school for next year, and also to the introduction of color work in the grammar schools, referred to above. The constant need for careful supervision to prevent waste is especially apparent in regard to what are classed as miscellaneous supplies.

At least 14,000 pupils will have to be provided with text-books and other supplies during a part of the next financial year. At the average cost per pupil this will make $17,500 required for the regular appropriation for text-books and supplies. To this must be added $500 for each of the three new grammar schools, for desk and reference books, maps, charts, and other furnishings; $400 to provide pianos for these schools, and $1,500 for apparatus and furnishings of the new Latin school. From January 1, 1899, the cost of maintaining the manual training school must be borne by the City; the estimate for stock used in the shops and for text-books and other supplies is $1,800.

The amount needed by this committee to carry on its work is $22,700, and this sum is requested for the year 1898–99.

For flags and flagstaffs there has been expended $226.13, of which $103.56 was for repairs to flags.

It was intended that a mast for displaying the high school flag should have been set this year, but owing to the war it was found impossible to procure one for the amount estimated earlier, and the request for the small additional appropriation required was not granted by the City Council.

School Accommodations.

The following is the report of the committee on schoolhouses:—

This year the Board may be congratulated on the prospect of the near completion of the new Latin school building and three practically new grammar schoolhouses; the Ellis school on Norris Street, North Cambridge, containing twelve rooms and a hall; the Roberts school on Harvard Street, corner of Winsor, Cambridgeport, with similar accommodations; and the transformation of the Peabody school from a six-roomed building to one of fourteen rooms and a hall, as originally designed ten years since.

In other parts of the city the need for new buildings or for remodelling old ones is undeniable. The interior of the Felton should be rearranged as suggested by this committee in their report two years ago. At that time the committee also mentioned the need of a modern building for the Dana school on Centre Street. This school is in a good situation, but many just complaints are made of the building. If this were replaced by a new brick schoolhouse of eight rooms, the service would be less expensive, and the children from the Stearns school which is badly lighted and unsatisfactory, could be divided between the Dana and the Allston, and the lots occupied by the Sargent and Stearns could be surrendered for other uses.

The Otis schoolhouse in East Cambridge is unsanitary and, should there be a fire, unsafe. As the location is good the best plan seems to be so to remodel the interior as to provide six good school-rooms with suitable small rooms and stairways.

The Washington schoolhouse has been condemned by the state authorities but continues to be used on sufferance. This occupies a valuable site and the proceeds from its sale would offset the cost of a new lot; this should be below Harvard Square in order to relieve the pressure of the Webster school.

For the present year this committee urge only the remodelling of the Felton and the Otis and active preparations for a new Dana schoolhouse which should be under way before September, 1899.

New chairs and desks of the adjustable pattern have been put in two rooms each at the Morse, Reed, and Thorndike schools, and one room at the Webster school, and this replacement should be continued yearly. The arrangement of a small room on a staircase at the Gore school for the use of the principal must be mentioned also.

The work of the janitors as a rule is much more satisfactory than formerly, most of the men appointed recently having been able and willing to do all that is required of them. During the last year new janitors have been appointed for the Gore, Peabody, Lowell, and Quincy schools, and men already in service have been transferred to the Taylor and Agassiz schools. The work of the inspector of janitors has continued to be of great service to the city and the schools.

Of the thirty-eight schoolhouses now in use, only one-half have brick sidewalks on the abutting streets; such sidewalks are included in the estimates for the schoolhouses now building and this should be the invariable rule. The other nineteen, including the Parker, Peabody, and Russell recently completed, should have paved sidewalks as soon as possible.

It is highly desirable also that the grounds about the schoolhouses should have more care than the Park Commission can give at present out of the limited appropriation for shade trees and public grounds, and it seems to this committee that a small appropriation should be made for schoolhouse yards. The Taylor and Gore school yards have been put in good order, the former from the appropriation for building the Taylor schoolhouse.

In conclusion the committee wish to express their appreciation of the cordial response made by the Superintendent of Public Buildings to the requests of this committee and the officials of the schools.

FRANCIS COGSWELL,

Superintendent of Public Schools.

[Further information in regard to the schools will be found in the annual report issued by the school committee.]

REPORT OF THE CAMBRIDGE WATER BOARD

CAMBRIDGE, December 20, 1898.

To the Honorable the City Council of the City of Cambridge :—

The annual report of the Cambridge Water Board for the year ending November 30, 1898, is herewith submitted for your careful consideration.

Last year we called attention to the fact of the completion of our work in the development and enlargement of the Stony Brook system.

When the City Council, on October 27, 1897, celebrated the completion of that work — which embraced the new high service reservoir at Payson Park, the new twenty million gallons pumping engine, and the two storage basins at Hobbs Brook — they looked at a completed system, but not a complete supply of water to properly furnish the system; and the natural question of doubt came to many minds as to the probability of the large lower basin being filled within a reasonable time. Our part of the work had been done. How long should we have to wait for what was so necessary to really complete the work — an ample supply of water?

It should be remembered that before the Water Board decided to construct a large basin at Hobbs Brook they had accumulated sufficient data from actual observation and measurements to determine that with an average yearly rainfall, about 2,500,000,000 gallons of water per year could safely be depended upon as a normal supply from Hobbs Brook, independent of Stony Brook, or a full year's supply for our City, based on an average daily use of 7,000,000 gallons— which was about the consumption the last year; and should a rainfall considerably above the average occur, we could store sufficient water to fill the basin and rely upon Stony Brook proper for the City supply during such period of accumulation. As no unusual yearly rainfall had occurred since 1890, and as 1888 and 1889 were the last years of extraordinary rainfall, we reasonably assumed by the rule of averages that 1898 would be likely to witness an abnormal rainfall. Hence the finishing work of riprapping the new basin was pushed late last fall, and by somewhat vigorous measures the contractor was forced to deliver the basin to our care before the winter storms set in.

On December 16, 1897, the gates at Winter Street dam were shut and the large lower basin began to be filled. The upper, or smaller, basin was already full. Beyond our most sanguine expectations have been the results. The rainfall the last year has been 52.42 inches. As a result, in less than eight months, or on August 21, 1898, the large basin was full to overflowing so that it became necessary, on November 1, 1898, to remove the top flush boards in the gate house at Winter Street dam to reduce the over supply, and although eight inches of water stored were thus given liberty, yet little decrease was effected. The basin has continued nearly full — grade 181 — and today the water stands at 180.93 with 36,000,000 of gallons per day running to waste at

Winter Street dam. As one inch of water in this basin means 15,000,000 gallons, it can readily be seen what an enormous amount of water Hobbs Brook is capable of storing and supplying; and confirms the wisdom of the plans made for the development of our Stony Brook system rather than a union with the very costly and to us less satisfactory Metropolitan water system.

Whatever other cities or towns may or do need as to the Metropolitan supply, Cambridge does not, and with proper care and utilization of what she has within reach will not need any other source of supply than Stony Brook for many years to come.

Should it ever be necessary to supplement the system as now completed and store an additional supply, it could be secured by building a dam at or near Beaver Pond, the head of Stony Brook, and should our City introduce the dual system — utilizing the waters of Charles River for purposes other than domestic — to which for the last two years we have called the attention of the City Council, it seems reasonable to believe that we shall have all the water Cambridge is likely to require for over a generation, especially if, as will probably be the case at some future time, water is all furnished through meters at meter rates.

The amount of water that has run to waste the last year over Stony Brook spillway and into Charles River is 5,704,600,000 gallons, which is equal to two years' supply, and indicates the possibilities of Stony Brook and its tributary, Hobbs Brook, as a water supply, should it be necessary at some future time to construct another storage basin. Since the connection was first made of Stony Brook and Fresh Pond, November 6, 1887, there have gone to waste into Charles River 62,608,186,076 gallons of water, or twenty-three years' supply based on present rate of consumption! And this in addition to what our City has used!

The consumption of water has increased the last year 961,592 gallons per day over that of the preceding year. This is owing largely to the increased pressure because of the entire City being supplied from Payson Park high-service reservoir. As we have in previous reports suggested, when the daily consumption amounts to 8,500,000 gallons the capacity of our present delivery pipe connecting Stony Brook with Fresh Pond will have reached its limit and another pipe should be laid large enough, with the present pipe, to keep Fresh Pond full and equal to any future demand of our water takers and equal to the largest daily supply of which our Stony Brook system is capable of furnishing. The cost of this will be about $400,000, and it is likely to be needed before many years, although it is hoped it may not be necessary until our water receipts shall be considerably in excess of the present revenue.

In this connection we suggest that care should be exercised by the City Council not to reduce existing water rates. Should water rates not be sufficient to meet fixed charges and other necessary expenditures, the deficit must be provided from the general tax levy. This has never been necessary so far in the history of the water works. It is hoped it never will be. Up to this time our taxpayers have never been assessed one dollar to pay for the cost of the water works system other than what is paid by them for the use of water. There is nothing in the domestic expenses of our citizens where they receive so much for so little as in the water they use.

Our financial statement this year is of more than ordinary interest because we can now present with approximate correctness the total cost of the development of the water system now completed and paid for, after six years from its commencement in 1893.

The total cost of the water works up to November 30, 1892	$3,195,214 38
And up to November 30, 1898	5,602,364 56
Increase in six years	$2,407,150 18
Deduct amount expended for General Construction	160,165 97
	$2,246,984 21

This amount ($2,246,984.21) represents the cost of the work the last six years, as already described.

In detail, the cost of each department of the new work has been as follows:—

1.	Payson Park high-service reservoir, including engineering and police service	$286,947 65
2.	Land for same (11 acres)	37,784 25
3.	New pumping engine, including foundation, inspection and Mr. Leavitt's services	138,501 42
4.	New boilers, alteration to engine house and boiler room, including services of Mr. Leavitt	58,475 24
5.	New forty-inch main, including Venturi meter	203,229 93
6.	Construction of Hobbs Brook basin, upper and lower	785,869 06
7.	Dams at Winter and Lincoln Streets	156,079 58
8.	Land taken for Hobbs Brook reservoir (1,000 acres)	233,914 65
9.	Fresh Pond land	156,873 68
10.	Fresh Pond improvements	189,308 75
		$2,246,984 21

Of the entire cost of the water works to date ($5,602,364.56) $3,249,100.00 are represented by outstanding unmatured bonds. The balance has been paid, and in addition is the amount paid into the sinking fund to redeem bonds not yet matured.

The value of the sinking fund we are not as yet able to state accurately, as we have not been able to get the figures from the City Treasurer. It should be about as follows:—

Amount in fund November 30, 1897	$464,138 38
Earning in 1898	18,647 83
Amount paid into sinking fund November 30, 1898	103,656 00
	$586,442 21
Deduct bonds paid maturing July 1, 1898	12,500 00
	$573,942 21

From this ($573,942.21) must be deducted the premiums paid for bonds purchased by the Commissioners during 1898, the amount of which premiums we have no knowledge of.

There are no more bonds maturing until November 1, 1906, and no large amounts until 1910. For detailed financial statement we refer you to the annual reports of the Registrar and Committee on Accounts.

The income from water rates has been disappointing, so that the year closes with a small deficit, although we have in every department kept within our appropriations except abatement and refund, which cannot ever be accurately estimated.

The unusually small number of new houses erected the past year, the reduced receipts because of the extension of the meter system and the reduc-

tion in meter rates made by the City Council early in the year have all contributed to this result. Besides these causes, our City receives no income, now, from Somerville, where, until lately, we received $6,000 per year.

Renewals and Construction.

During the past four years, in anticipation of the increased pressure from high service, all of the old cement-lined pipe and considerable of the old iron pipe have been removed, and the entire system is now in better condition than ever before. Details of this are given in the Superintendent's report. The amount paid for renewals the last four years is $142,000.00 It is not probable that much will be needed for further renewals for some time.

During the year, Mr. E. C. Brooks, who, since Mr. Harrington's death, has been Acting Superintendent, was chosen Superintendent and Mr. E. I. Harris appointed Chief Engineer to succeed Mr. Brooks.

Our City is to be congratulated in having men of such ability in charge of such responsible positions.

Pumping Station, Fresh Pond.

During the early part of the year, the new pumping engine, after being fully tested, was accepted by Mr. Leavitt, who planned it for the City, and we are assured that it is the finest and most complete pumping engine of its character in the United States. It is proving all that was anticipated, and should be, for many years, a source of pride and congratulation for the perfection of its mechanism and the economical results secured.

The two ten million gallons pumping engines have been altered during the year so as to be auxiliary to the large engine in case of necessity. The high-service engines of 2,000,000 and 1,000,000 gallons formerly supplied the standpipe; the smaller of these two will be sold.

With the new floor laid during the year and the walls painted, and new front door placed, the engine house is in better condition than ever before and with the new engine in operation it is a sight which our citizens should not fail to see and will be well repaid for inspecting.

Fresh Pond.

No work was done around the pond this year until late in the fall because of failure of the City Council to appropriate anything for this purpose until too late to be of much service.

It can hardly be considered wise or economical to allow the incomplete work on the westerly side of the pond to remain in an unfinished condition. It should be taken hold of promptly another year when the season opens and a reasonable appropriation made to properly complete it.

The borders of Fresh Pond will surely be one of the most attractive features of our park system in the future, and should be laid out in harmony with the other parts of the park system, although from their location they are properly under the care of the Water Board.

All cost of the land and its improvements have been met or will be met from water receipts, either direct or through bonds paid by surplus water receipts. It is a question to be now considered whether a permanent improvement like the work referred to should not in part at least be provided for by bonds.

The last unsettled claim for land taken around Fresh Pond — the Gray land — has recently been adjusted by compromise, after two years' delay.

The Fitchburg Railroad, early in the year, removed their tracks from the Fresh Pond area and payment was made as indicated in our last report.

We are pleased to include these two items among the completed facts of the last year.

Cambridge Reservoir.

As the old reservoir has not been used for nearly a year, and as this site is valuable for residental purposes, some steps should be taken during the coming year to dispose of it and the proceeds placed in the sinking fund of water works, as the City will not require the property further for water purposes.

Payson Park Reservoir.

The grading has been completed during the year, and the surroundings now are finished other than some little grading and the completion of Elm Street, through which run the forty-inch supply and delivery mains. This work is to be done in connection with the Payson Park Land Trustees and only awaits their arranging with the abuttors for the Water Board to do its part.

Stony Brook Reservoir.

The basin here is in fine condition, and the keeper, Mr. Silas Baxter, has been vigilant and faithful, as usual, in his duties at this very important point in the water works system.

It is a position requiring constant watchfulness, being the main artery of our water supply, as it is from this point the pipe starts that connects Stony Brook with the City of Cambridge.

Hobbs Brook Reservoir.

The keeper's house, corner of Lincoln Street and the County Road, was completed late last year and Mr. J. E. Bryant was appointed keeper — his duties embracing the care of the upper and lower basins. The duties have been faithfully and satisfactorily attended to. The condition of the basin is excellent and the cleanliness of the shore and protection from washing away in time of high winds and waves fully justify the action of the Water Board in having the riprapping thoroughly done before allowing water to accumulate in the basin.

The water in the basin having been so quickly stored, no vegetable growth developed nor is likely to and hence the conditions, as Professor Sedgwick recently remarked, are "wellnigh perfect," and the water being well settled before it leaves the basin must be as good water as any city in New England has.

During the year, Dr. Greenwood, of Waltham, our medical inspector, has made a careful survey of Hobbs Brook and all its tributaries and reports every thing in excellent condition and the sources to be so located as to almost preclude any possibility of defilement.

He has also made a thorough inspection of Stony Brook proper and its tributaries. Several cases from which there might possibly enter some objectionable matter has been attended to, and early in the fall the members of the Water Board made a personal examination, with him, of all these points and found them satisfactory.

When we contrast the present conditions of Stony and Hobbs Brooks with what existed when we first commenced taking water from that source we are sure that the water this year is purer than ever before and our citizens need not resort to the use of so-called spring water for their drinking supply.

We believe if the State Board of Health will sustain the protective law as related to water supplies passed in 1897 no apprehension need exist as to any future defilement.

During the early part of last fall information came to us from reliable sources that a plan was formulated for the erection of a large hog slaughtering establishment close to Cherry Brook — an important affluent of Stony Brook in South Lincoln.

A conference was held with the Selectmen and local Board of Health of Lincoln with the result of a joint petition of Cambridge and Lincoln, in which Waltham, Lexington and Weston also united, to the State Board of Health, requesting action on their part in conformity with the act of 1897 to prevent the erection of the slaughter house. Subsequent to this a special town meeting was called in Lincoln, where, by a decided majority vote, a license was refused to the petitioners.

It is hoped the State Board of Health will realize the gravity of such cases and in the spirit and letter of the act of 1897 protect the citizens of this Commonwealth against all such plans which are a menace to the public health and comfort.

It may be well to secure additional legislation the coming winter which shall further discourage all such plans that are made with little regard to public health.

The Water Board, recently, in furtherance of co-operation with the State Board of Health decided to purchase the Sargent place in South Lincoln, as being the only solution of what has been, since we connected with Stony Brook, a difficult problem to solve. An appropriation will soon be asked for this.

There now remains unsettled of the Hobbs Brook land taking only a few minor cases, settlement for which will probably not exceed a few hundred dollars, and this will complete the settlement for lands taken at Hobbs Brook.

Office Work.

The Water Registrar, Mr. W. H. Harding, who is also Clerk of the Board, has carefully attended to the duties of his department and with entire satisfaction to the Board.

Although the work of this office has so largely increased during the last four years, only two additional assistants have been appointed. The cost of the office has increased but fifteen hundred dollars in five years. The employees have been faithful, attentive and courteous, as always.

The Assistant Superintendent, Mr. C. B. Parker, has attended to his varied duties with promptness and efficiency, as usual.

Most of our citizens are not probably aware that the calls on the Water Department are similar to those on the Fire Department. Any break or leak must be responded to at any and all times, night or day, in all weathers, no matter what the exposure is. We perhaps too seldom recognize the value to our comfort and safety of the men who, occupying humble and often unnoticed positions, do such excellent service with pick and shovel, often involving great discomfort and always hard manual labor.

The faithful services of our permanent employees are cordially commended.

New Stable.

It became necessary the past year to build a new brick stable at the Auburn Street pipe yard and to make some changes in the house of the keeper there, as well as other changes in the line of economical handling of supplies which the old buildings do not afford. The work has been well done at a cost of about seven thousand dollars, and is a credit to the City. The Superintendent's report refers to this in detail.

We are glad to refer to the cordial relations that have existed between the Water Board and the Chief Executive of our City and the City Council—being a continuation of the unbroken and mutually pleasant relations and confidence that have ever marked the history of the Water Board and its relation to the Mayors and City Councils of our City.

The harmony that has existed in the councils of our Board with so many perplexing and important problems to solve during the last four years—the most important four years of its history—is one of the compensations for the service rendered the City—a service that will, we are confident, more and more commend itself to our fellow-citizens by the results already achieved and the possibilities of the future.

JAMES M. W. HALL,
WELLINGTON FILLMORE,
STILLMAN F. KELLEY,
FRANK A. ALLEN,
GEORGE H. HOWARD,

Cambridge Water Board.

REPORT OF THE WATER REGISTRAR

WATER REGISTRAR'S OFFICE,
CAMBRIDGE, December 7, 1898.

To the Cambridge Water Board : —

GENTLEMEN : —In compliance with the requirements of the City Ordinance, I present the thirty-fourth annual report of the operations of this department, showing the receipts, expenditures and abatements, together with a statement of the number of water takers, etc., for the year ending November 30, 1898.

Amount of bills remaining unpaid November 30, 1897 : —

Water rates	$221 66
Meter rates	550 35
Supplies and repairs	1,444 28
Off and on	122 00
Seals	14 25
Rents	26 66
Maintenance account	32 50
Construction account	168 03

Amount of bills placed in hands of City Treasurer for collection, from November 30, 1897, to December 1, 1898 : —

Water rates	$225,230 96	
Meter rates	80,846 11	
Supplies and repairs	5,880 29	
Off and on	726 00	
Seals	164 75	
Rents	326 35	
Maintenance account	1,391 61	
Construction account	625 14	
Total bills		$317,770 94

There has been collected : —

Water rates	$220,446 14
Meter rates	79,847 38
Off and on	691 00
Seals	162 75
Supplies and repairs	6,036 03
Rents	353 01
Maintenance account	1,331 46
Construction account	693 99

There has been abated :—

Water rates, off and on, seals and rents	$5,262 79
Supplies and repairs	18 30
Amount carried forward	$314,842 85

Amount brought forward	$314,842 85	
Construction account	22 80	
Maintenance account	13 50	
There remains unpaid: —		
Water rates	$154 85	
Meter rates	1,176 42	
Supplies and repairs	1,270 24	
Off and on	124 00	
Seals	10 75	
Maintenance account	79 15	
Construction account	76 38	
		$317,770 94

Expenditures.

Construction account (general)	$26,007 47	
Construction account (Fresh Pond Reservoir)	5,734 83	
Construction account (Hobbs Brook Reservoir)	182,619 92	
Construction account (Payson Park Reservoir)	39,787 66	
Construction account (Fresh Pond land)	62,288 57	
Maintenance account (general)	28,736 52	
Maintenance account (office)	5,739 26	
Maintenance account (pumping)	14,136 52	
Maintenance account (renewal of mains)	15,534 91	
Maintenance account (Stony Brook Reservoir)	1,310 98	
Maintenance account (Hobbs Brook Reservoir)	859 97	
Maintenance account (Payson Park Reservoir)	940 09	
Maintenance account (Fresh Pond Reservoir)	8,853 51	
Supply account	5,064 46	
		$397,614 67

Abatements.

Water rate bills to the amount of	$5,262 79	
Maintenance bills to the amount of	13 50	
Supply and repair bills to the amount of	18 30	
Construction bill to the amount of	22 80	
		$5,317 39

Refunds.

Water rates to the amount of	$3,163 74	
Which amount deducted from the receipts	300,293 52	
Leaves net receipts for water	$297,129 78	
Add off and on, rents, seals and maintenance account	2,538 22	
Makes net receipts of "rates, fines, etc."		$299,668 00

Off and On.

Water has been shut off for non-payment of rates or per order on account of vacancy, and seals have been applied to fixtures by request of owners, as follows:—

Water shut off in 1898	687
Supplies let on, shut off in 1898	529
Supplies let on, shut off in previous years	98
New supplies let on	249
Seal locks applied to fixtures in 1898	1,229
Seal locks removed, put on in 1898	659
Seal locks removed, put on in previous years	468

This year the City of Somerville has taken on her water system every consumer formerly supplied by the City of Cambridge, with the resultant effect of a shrinkage of about six thousand dollars in our receipts.

Statement of the yearly revenue received from water rates since the purchase of the works by the City :—

From April 28, 1865, to December 1, 1865	$32,367 19
From December 1, 1865, to December 1, 1866	40,073 27
From December 1, 1866, to December 1, 1867	52,733 62
From December 1, 1867, to December 1, 1868	63,747 42
From December 1, 1868, to December 1, 1869	76,149 30
From December 1, 1869, to December 1, 1870	92,605 95
From December 1, 1870, to December 1, 1871	111,782 65
From December 1, 1871, to December 1, 1872	127,201 30
From December 1, 1872, to December 1, 1873	146,117 32
From December 1, 1873, to December 1, 1874	153,634 27
From December 1, 1874, to December 1, 1875	138,880 37
From December 1, 1875, to December 1, 1876	179,166 76
From December 1, 1876, to December 1, 1877	154,843 59
From December 1, 1877, to December 1, 1878	157,443 91
From December 1, 1878, to December 1, 1879	164,681 90
From December 1, 1879, to December 1, 1880	173,325 49
From December 1, 1880, to December 1, 1881	170,062 73
From December 1, 1881, to December 1, 1882	177,430 80
From December 1, 1882, to December 1, 1883	179,361 89
From December 1, 1883, to December 1, 1884	161,526 27
From December 1, 1884, to December 1, 1885	185,544 36
From December 1, 1885, to December 1, 1886	199,404 43
From December 1, 1886, to December 1, 1887	204,748 64
From December 1, 1887, to December 1, 1888	211,156 27
From December 1, 1888, to December 1, 1889	221,124 70
From December 1, 1889, to December 1, 1890	231,116 32
From December 1, 1890, to December 1, 1891	227,054 53
From December 1, 1891, to December 1, 1892	237,527 08
From December 1, 1892, to December 1, 1893	242,219 78
From December 1, 1893, to December 1, 1894	250,032 71
From December 1, 1894, to December 1, 1895	268,813 62
From December 1, 1895, to December 1, 1896	281,030 00
From December 1, 1896, to December 1, 1897	291,457 62
From December 1, 1897, to December 1, 1898	297,129 78

Comparative Statement.

	1897		1898	
CONSTRUCTION ACCOUNT (PAYSON PARK RESERVOIR).				
Received.				
From bonds issued	$75,000 00		$45,000 00	
From premium on bonds sold	3,000 00		2,554 00	
Overtime on pay-rolls, etc			41 00	
Sale of transit and old material	419 86			
		$78,419 86		$47,595 00
Expended.				
Construction of reservoir, pumping engine, etc	$70,760 24		$39,787 66	
Balance of appropriation	7,659 62		7,807 34	
		$78,419 86		$47,595 00
CONSTRUCTION ACCOUNT (HOBBS BROOK RESERVOIR).				
Received.				
From bonds issued	$400,000 00		$187,000 00	
From premium on bonds sold	7,672 00		5,055 00	
From sale of grass, feed, old material, etc	691 55		576 26	
		$408,363 55		$192,631 26

Comparative Statement (Continued).

	1897		1898	
Expended.				
Construction of reservoir, land settlements, etc., etc.	$398,187 52		$182,619 92	
Balance of appropriation	10,176 03	$408,363 55	10,011 34	$192,631 26
CONSTRUCTION ACCOUNT (FRESH POND LAND).				
Received.				
From bonds issued			$63,000 00	
From premium on bonds sold			3,486 00	$66,486 00
Expended.				
Settlements with John C. Gray and Fitchburg Railroad, etc			$62,288 57	
Balance of appropriation			4,197 43	$66,486 00
CONSTRUCTION ACCOUNT (GENERAL).				
Received.				
From bonds issued	$12,500 00		$30,000 00	
From premium on bonds			1,098 00	
From sale of pipe, fittings, etc.	49 30	$12,549 30	76 73	$31,174 73
Expended.				
Sundry bills	$11,284 37		$26,007 47	
Balance of appropriation	1,264 93	$12,549 30	5,167 26	$31,174 73
CONSTRUCTION ACCOUNT (FRESH POND RESERVOIR).				
Received.				
From bonds issued			$8,000 00	
From excess of receipts from "rates, fines, etc."		$16,972 74		$8,000 00
Expended.				
For filling and grading at Fresh Pond		$16,972 74	$5,734 83	
Balance of appropriation			2,265 17	$8,000 00
MAINTENANCE ACCOUNT.				
Received.				
From "rates, fines, etc."	$292,836 26		$298,336 54	
From sale of grass, old material, etc	3,130 51		1,331 46	
Accrued interest on water bonds sold	892 00	$296,858 77	455 97	$300,123 97
Expended.				
Care and repairs	$80,329 89		$76,111 76	
Interest on water debt	105,134 00		124,854 00	
Paid to sinking fund commissioners	91,091 00	$276,554 89	103,656 00	$304,621 76
Excess of receipts		$20,303 88		
Deficit in receipts				$4,497 79
SUPPLY ACCOUNT.				
Received.				
From pipe and labor on supplies		$7,512 46		$6,036 03
Expended.				
Sundry bills for stock and labor		$6,376 33		5,064 46
Excess of receipts		$1,336 13		$971 57

1897	Maintenance account, excess of receipts	$20,303 88	
	Supply account, excess of receipts	1.136 13	
	Excess of total receipts over total expenditures	$21,440 01	
	Transferred to Construction Account (Fresh Pond Reservoir)	16,972 74	$4,467 27
	Balance carried to Sinking Fund		
1898	Maintenance Account, excess of expenditures	$4,497 79	
	Supply Account, excess of receipts	971 57	
	Excess of total expenditures over total receipts		$3,526 22

By comparing the above table of receipts from water rates it will be seen that our annual average increase has fallen off in 1898, as compared with recent years.

The loss in revenue is due, principally, to the small number of dwellings erected during the last year, the few fixtures added in dwellings already erected, the abatement of a large number of hose charges on account of the wet season, and the setting of meters to cover domestic consumption, and a reduction in the rates for metered water.

The only water rate charges made in 1898 remaining unpaid are for additional fixtures and for metered water, to the amount of $963.17 out of a total of $306,000 00. Of the amount unpaid ($963.17) nearly seven hundred dollars ($700.00) is due from a corporation whose affairs are in the hands of assignees and the court has issued an injunction restraining the City from collecting the bill by the ordinary methods. Deducting this bill from the total amount unpaid to the amount of two hundred and sixty-five dollars ($265.00).

In addition to the manufactories, etc., supplied through meters, water is supplied to 19,892 families, 892 stables, with 3,107 horses and 210 cows; 334 shops; 821 stores and offices, by the following fixtures, viz:—

23,751 faucets,	90 urinals,
8,193 wash basins,	17 yard hydrants,
10,150 wash tubs,	4 fountains,
6,945 bath tubs,	45 tumbler washers,
374 slop closets,	1,926 hand hose,
19,596 pan closets,	10 motors.
6 hopper closets,	

Also,

922 fire hydrants (besides 19 on private premises).
8 fire reservoirs,
28 drinking fountains in public squares,
59 street watering standpipes,
4 public sanitaries.

The above schedule does not include those in schoolhouses, engine houses, police stations, and other City buildings, or where the use of water is covered by meter.

The customary house-to-house inspection of the service pipes and fixtures on the premises of the water takers has been made with the usual satisfactory and remunerative results.

Respectfully submitted,

WALTER H. HARDING,
Registrar.

ANNUAL STATEMENT OF THE WATER REGISTRAR TO THE COMMITTEE ON ACCOUNTS

December 1, 1898.

Water rates unpaid November 30, 1897		$772 01	
Supplies and repairs unpaid November 30, 1897		1,444 28	
Off and on bills unpaid November 30, 1897		122 00	
Seals unpaid November 30, 1897		14 25	
Rent unpaid November 30, 1897		26 66	
Maintenance account unpaid November 30, 1897		32 50	
Construction account unpaid November 30, 1897		168 03	
		$2,579 73	
Bills placed in hands of City Treasurer for collection from December 1, 1897 to December 1, 1898 :—			
Water rates from annual ledgers	$214,994 50		
Water rates from fractional ledger	10,236 46		
Water rates from meter ledger	80,846 11		
Off and on water	726 00		
Rent	326 35		
Seals	164 75		
Supply and repair bills	5,880 29		
Maintenance accounts	1,391 61		
Construction accounts	625 14		
		315,191 21	
Total bills			$317,770 94
There has been collected :—			
Annual ledgers	$211,337 02		
Fractional ledger	9,109 12		
Meter ledger	79,847 38		
Off and on ledger	691 00		
Rent ledger	353 01		
Seal ledger	162 75		
Maintenance account	1,331 46		
Construction account	693 99		
Supply and repair account	6,036 03		
Total collections		309,561 76	
There has been abated :—			
Water rates, off and on, and seals	$5,262 79		
Maintenance account	13 50		
Supply account	18 30		
Construction account	22 80		
		5,317 39	
Amounts carried forward		$314,879 15	$317,770 94

Amounts brought forward		$314,879 15	$317,770 94
There remains uncollected: —			
Water rents	$1,331 27		
Supplies and repairs	1,270 24		
Off and on	124 00		
Seals	10 75		
Maintenance account	79 15		
Construction account	76 38		
		$2,891 79	
Total bills for collection		$317,770 94	
Less abated	$5,317 39		
Less refunded	3,163 74		
Less unpaid	2,891 79		
		11,372 92	
Net receipts			$306.398 02

Attest :

WALTER H. HARDING,
Registrar.

CAMBRIDGE, December 15, 1898.

We have examined the accounts of the Water Registrar and find that they correspond in the amounts collected, abated, refunded and uncollected with the statement submitted by the City Treasurer and verified by the City Auditor.

FRANK A. ALLEN,
STILLMAN F. KELLEY, } *Committee on Accounts.*

CITY OF CAMBRIDGE,
OFFICE OF THE CITY TREASURER,
December 1, 1898.

To the Cambridge Water Board :

GENTLEMEN :—I give you herewith a record of the transactions between the Water Office and the City Treasurer's Office during the year ending November 30, 1898.

Gross collections for account of Water Works, "Rates, fines, etc."	$306,763 07
Abatement certificates received and paid on "Water Rates"	5,276 29
Gross collections for account of Water Works, "Supply Account"	6,054 33
Abatement certificates received and paid on "Supply Account"	18 30
"Refund" certificates have been presented and paid to the amount of	3,163 74
Uncollected bills in my hands November 30, 1898, for account of "Maintenance, Construction, and Water Rates," amount to	1,621 55
Uncollected bills in my hands November 30, 1898, for account of "Supplies, Repairs, etc.," amount to	1,270 24
Gross collections for account of Water Works, "Construction, General Account"	76 73
Gross collections for account of Water Works, "Construction, Hobbs Brook Account"	576 26
Gross collections for account of Water Works, "Construction, Payson Park Account"	41 00
Gross collections for account of Water Works, "Maintenance, General Account"	1,344 96

Very respectfully,

WILLIAM W. DALLINGER,
City Treasurer.

I have examined the above statement and find it correct.

HARRY T. UPHAM,
City Auditor.

REPORT OF THE SUPERINTENDENT OF WATER WORKS

CAMBRIDGE, December 1, 1898.

To the Honorable Water Board of the City of Cambridge :

GENTLEMEN :—Complying with the City Ordinance, I herewith submit the thirty-fourth annual report of the Superintendent. for the year ending November 30, 1898.

Consumption.

The total quantity of water pumped during the past year was	2,792,321,110	gallons
Daily average water pumped during the past year	7,650,195	"
Quantity of water sold by meter	602,565,725	"
Quantity of water used for sprinkling streets	83,900,800	"
Quantity of water used for flushing sewers	1,250,000	"
Quantity of water used for cleaning sanitaries	7,500,000	"
Quantity of water used for drinking-fountains	32,666,000	"
Total	727,882,525	"
Leaving for domestic purposes	2,064,438,585	"

Number of gallons daily for each inhabitant on the total amount pumped, 85.69.

Number of gallons daily for each inhabitant on the total amount used for domestic purposes, including water for private stables, hose, public buildings and fire purposes, 63.35.

The increase in the consumption of water during the past year must be accounted for largely by waste due to the increase of pressure throughout the City.

The amount of main pipe that has been renewed during the past four years, together with the supplies on the same, make it evident that in so far as the main pipe and street connections are concerned the works have never been in as good condition as at present.

I would recommend that the supplies for all public buildings be metered that we may be able to account as far as possible for the total consumption of water.

There have been installed during the past year four recording gauges, in the different parts of the City, to record the variation of the water pressure. One is located at No. 4 Engine House, North Cambridge; one at the City Hall; one at No. 3 Engine House, East Cambridge; and one at No. 7 Engine House, at the lower Port. The record sheet covers one week; all sheets are changed the same day and filed at the water office.

The grade of each gauge is taken and is recorded on the sheets as they are taken off, so that all the pressures can be referred to same datum line.

It may be of interest to know that during the recent large fire at the J. P. Squire establishment in East Cambridge, the pressure at that point was fully up to the maximum pressure there before the increase made this year.

Comparative Statement of Total Pumping During the Past 9 Years.

Date.	Total Yearly Pumping.	Increase or decrease.	Average Daily Pumping	Increase or decrease.	Gallons to each inhabitant daily.
1890....	1,638,550,512	112,111,507 increase.	4,489,178	307,155 increase.	62.35
1891....	1,778,056,775	139,506,263 "	4,871,388	382,210 "	64.71
1892....	1,961,362,760	183,305,985 "	5,358,914	487,526 "	66.00
1893....	2,234,863,924	273,501,164 "	6,122,915	764,001 "	74.50
1894....	2,127,878,627	106,985,297 decrease.	5,829,804	293,111 decrease.	69.19
1895....	2,190,781,892	62,903,265 increase.	6,002,142	172,338 increase.	71.65
1896....	2,413,506,557	222,724,665 "	6,594,280	592,138 "	75.90
1897....	2,441,340,196	27,833,639 "	6,688,603	94,323 "	76.46
1898....	2,792 321,110	350,980,914 "	7,650,195	961,592 "	85.69

Comparative Statement of Domestic Pumping During the Past 9 Years.

Date.	Domestic Yearly Pumping.	Increase or Decrease.	Average Daily Pumping.	Increase or Decrease.	Gallons to each inhabitant daily.
1890....	1,217,062,012	61,140,305 increase.	3,334,416	167,507 increase.	46.08
1891....	1,270,360,425	53,298,413 "	3,480,439	146,023 "	46.24
1892....	1,426,400,135	156,039,710 "	3,897,268	416,829 "	48.00
1893....	1,668,235,574	241,835,439 "	4,570,509	673,241 "	55.61
1894....	1,547,943,977	120,291,597 decrease.	4,240,942	329,567 decrease.	50.34
1895....	1,530,152,817	17,791,160 "	4,192,199	48,743 "	50.04
1896....	1,730.224.007	200,071,190 increase.	4,727,388	735,189 increase.	54.42
1897....	1,740.357,346	10,133,339 "	4,768.102	40,714 "	54.50
1898....	2,064,438,585	324,081,239 "	5,655,996	887,894 "	63.35

Total amount of coal consumed (in lbs.)	4,372,808
Daily average coal consumed (in lbs.)	11,980
Coal consumed per million gallons pumped	1,566.20
Highest water in Fresh Pond was on May 2, 1898	17.35
Lowest water in Fresh Pond was on Oct. 19, 1898	15.23
Average height of water in Fresh Pond	16.13
Highest water in Stony Brook Reservoir was on Feb. 22, 1898	82.27
Lowest water in Stony Brook Reservoir was on Aug. 5, 1898	75.42
Highest water in Hobbs Brook Reservoir was on Oct. 27, 1898	181.53
Total rainfall at Fresh Pond Pumping Station	52.42
Total rainfall at Stony Brook Reservoir	54.03

Total Rainfall for the Last Ten Years.

Month	1889	1890	1891	1892	1893	1894	1895	1896	1897	1898
	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.
December.	6.67	3.30	4.40	6.78	1.23	5.23	4.43	1.90	1.63	4.31
January..	6.64	2.94	6.68	4.32	1.87	3.05	3.57	2.46	3.32	4.75
February...	2.81	5.22	4.61	2.46	6.43	2.91	1.07	5.62	2.36	3.61
March.....	3.29	7.02	5.74	3.56	2.50	.84	2.68	4.37	2.66	2.03
April.....	3.73	4.83	2.72	.77	3.25	2.94	4.15	1.70	2.82	6.22
May.....	5.65	6.09	2.44	6.06	7.30	4.63	2.39	2.42	4.24	3.92
June.....	3.44	3.51	4.01	4.23	2.18	.81	2.76	2.33	5.16	1.82
July.....	8.53	2.77	3.06	2.53	2.26	2.88	3.28	2.65	4.68	4.50
August.....	3.78	3.48	3.68	6.11	5.95	1.63	4.71	2.45	5.06	7.34
September..	5.30	4.05	2.73	1.84	1.76	2.40	1.83	6.29	3.22	1.78
October.....	3.73	9.31	5.10	2.15	3.77	5.19	10.16	3.10	.55	7.22
November..	6.51	1.28	3.08	4.04	1.99	3.34	6.09	3.53	6.83	4.92
Total. ...	60.08	53.80	48.25	44.85	40.49	35.85	47.12	38.82	42.53	52.42

Fresh Pond and Surroundings.

The roadway around the pond, the grass borders and the planted section have received the usual care.

The nusery has required more than ordinary care, as a large amount of transplanting has been necessary.

A large part of the standing grass has been sold, as the crop was much beyond the needs of the department.

The water in the pond has been at the average height of 16.13 feet during the year and has been of remarkably good quality.

Work on the filling and grading of the section on the west side of the pond was begun on October 17th and continued until November 26th, when the weather made further work impracticable.

The buildings are in good condition but should be painted this year.

Fresh Pond Reservoir.

Date.	Lowest point reached during month.	Highest point reached during month.	Monthly Rainfall, inches.	Intake Gate.			
				8-Inch Opening.		30-Inch Opening.	
				Opened.		Opened.	Closed.
1897.							
Dec. 1	15.37	.....	4.31	During entire	28 turns.		
Dec. 19	.....	15.82	.....	month.	.....		
1898.							
Jan. 20	15.57	.....	4.75	During entire	28 turns.		
Jan. 27	.....	15.96	.....	month.	.....		
Feb. 20	15.68	.....	3.61	During entire	28 turns.		
Feb. 26	.....	16.32	.....	month.	.....		
Mar. 1	16.33	.....	2.03	During entire	28 turns.		
Mar. 31	.....	16.53	.....	month.	.....		
April 15	16.52	.....	6.22	During entire	28 turns.		
April 30	.....	17.29	.....	month.	.....	April 17, 30 in.	
May 12	16.60	.....	3.92	During entire	From 2d to 13th 9½ turns.	.....	May 2.
May 2	.....	17.35	.....	month.	From 13th to 31st 28 turns.	May 13, 30 in.	May 31.
June 30	16.59	.....	1.82	During entire	28 turns.	June 17, 30 in.	
June 7	.....	17.34	.....	month.	....	.....	
July 26	15.97	.....	4.50	During entire	28 turns.	During entire	
July 4	.....	16.63	.....	month.	.....	month.	
Aug. 9	15.76	.....	7.34	During entire	28 turns.	During entire	
Aug. 26	.....	16.33	.....	month.	.....	month.	
Sept. 17	15.47	.....	1.78	During entire	28 turns.	During entire	
Sept. 2	.....	16.	.....	month.	.....	month.	
Oct. 19	15.23	.....	7.22	During entire	28 turns.	During entire	
Oct. 1	.....	15.70	.....	month.	.....	month.	
Nov. 5	15.45	.....	4.92	During entire	28 turns.	During entire	
Nov. 27	.....	16.40	.....	month.	.....	month.	
Total			52.42				

Pumping Station and Grounds.

All the work in connection with the putting in of the new engine and boilers and the alterations of the buildings made necessary by the same, together with the alterations to the old engines, have been completed.

The Station is now in a very satisfactory condition.

The new engine has been in operation nearly the whole year and its performance has been very satisfactory. There has been no duty trial made as yet to determine the efficiency of the engine or boilers, but we hope to arrange for one early the coming year.

It will be necessary to do some work on the lawn and driveways the coming year.

Highland Street Reservoir.

On February 12th the water was shut off from this reservoir and the City supplied through the two sixteen-inch (16-in.) Ross reducing valves in the forty-inch (40-in.) main leading from Payson Park reservoir.

The pressure in the City was increased about fifteen pounds. This has continued to the present and the valves have given perfect satisfaction.

The water in Highland Street reservoir has since been drawn off and the basin cleaned out; it remains so at present.

I would recommend that the connection with this reservoir be cut off and the site disposed of for building purposes.

Payson Park Reservoir.

The whole City has been supplied from this source since February 12th.

The grounds about the reservoir have become a very popular resort for those driving or wheeling on account of the fine view from this point.

From September 19th to 24th the water was drawn off from the south basin for the purpose of cleaning and making an examination of the asphalt bottom. The asphalt was found to be blistered over an area of nearly one-third (1-3) of the bottom, the blisters in some cases being six feet, or more, in diameter.

I would recommend that the basin be underdrained the coming year.

A neat and substantial tool-house has been built on the north side of the reservoir.

Pipe Yard.

A very much needed improvement has been made at the yard, this year, by the building of a new brick stable. The plans were prepared by Mr. C. Herbert McClare, architect of Cambridge and the contract was awarded to Mr. S. J. Kelley, of this City, for the sum of $6,591.00. The stable has accommodations for fourteen horses, with wash room, harness room and other conveniences. The building is nearly completed and will be ready for occupancy the latter part of this month.

The dwelling house has been separated from the shed and the end of the shed covered with corrugated iron as a protection against fire. The upper tenement of the house has received some very much needed repairs and, when painted, will be in good condition.

The lower tenement is in need of repairs which should be made the coming year.

The old stable will require some alterations to fit it for storage purposes. When these are completed the yard will be much more convenient for the use of the department.

We have on hand at the pipe yard a large amount of old material that has been stored for years and will, in all probability, never be used; much of it should have been disposed of years ago. I would recommend that such as, in the judgment of the Board, is of no use, be disposed of as old metal.

Pipe Bridges.

The new bridge projected by the Fitchburg Railroad Company, on Massachusetts Avenue, will necessitate some considerable changes in the water pipes at this point; the plan that seems best being to carry the pipes across the bridge, under the sidewalk, providing for their support in the iron work supporting the sidewalk.

The sixteen-inch (16-in.) pipe line across Brookline Street bridge suffered serious damage during the recent storm; about three hundred (300) feet on the southerly side of the bridge being carried into the river by the very high tide. The pipe has been raised and very little of it found damaged.

I would recommend that the pipe be removed, as there seems to be no need of it under the changed conditions of the water supply in this section.

Leakage.

Fourteen hundred eight (1,403) leaks have been reported and investigated.

Fifteen (15) have been stopped on iron main pipe, as follows: Five (5) on 4-inch, seven (7) on 6-inch, one (1) on 8-inch, one (1) on 12-inch and one (1) on 20-inch.

Twelve hundred seventy (1,270) have been reported on pipes and fixtures on premises; these have been repaired by the occupants or owners.

One hundred twenty-three (123) on supplies in streets have been repaired by the Department.

Of the total number of leaks stated above, twelve hundred sixty (1,260) were reported by the inspectors as the result of the annual canvass; they were distributed as follows: Three hundred fifty-one (351) on faucets, eight hundred thirty-five (835) on the water-closets and seventy-four (74) on pipes.

Table Showing Gain or Loss in Total Consumption for the Year 1898 over the Year 1897.

	Total Consumption, 1898.	Total Consumption, 1897.	Increase or Decrease, + or —.
December	210,803,340	216,367,481	— 5,564,141
January	235,138,540	222,050,830	+ 13,087,710
February	221,925,900	190,232,540	+ 31,693,360
March	228,800,475	202,428,145	+ 26,372,330
April	212,361,600	197,402,585	+ 14,959,015
May	215,073,060	191,350,040	+ 23,723,020
June	241,610,160	195,727,510	+ 45,882,650
July	250,865,560	215,121,905	+ 35,743,655
August	265,579,600	210,523,365	+ 55,056,235
September	229,313,920	208,745,405	+ 20,568,515
October	260,146,275	209,623,410	+ 50,522,865
November	220,702,680	181,766,980	+ 38,935,700
Total	2,792,321,110	2,441,340,196	+ 350,980,914

Main Pipe.

Main pipes have been laid in the following streets: 1,400½ of 6-inch in Allston Street, from Pearl Street to Waverly Street, in place of 4-inch removed; 714 feet of 6-inch in Amory Street, from Summer Street to Hampshire Street, in place of 4-inch removed; 196 feet of 6-inch in Antrim Street, from Cambridge Street south, in place of 4-inch removed; 136½ feet of 4-inch in Appleton Place; 845 feet of 6-inch in Arlington Street, from Massachusetts Avenue

to Walnut Avenue, in place of 4-inch removed; 105 feet of 6-inch in Bancroft Street, from Western Avenue; 415 feet of 6-inch in Beaver Street, from Cowperthwaite Street to Flagg Street, in place of 4-inch removed; 452 feet of 6-inch in Binney Street, east and west from Fifth Street; 349 feet of 6-inch in Boardman Street, from Harvard Street to Broadway, in place of 4-inch removed; 826½ feet of 6-inch in Bow Street, from Massachusetts Avenue to Linden Street, in place of 4-inch removed; 210 feet of 1¼-inch in Boylston Street, from Mt. Auburn Street; 34 feet of 6-inch in Brooks Street; 515 feet of 6-inch in Brown Street, from Foster Street to Brattle Street, in place of 4-inch removed; 81 feet of 4-inch in Buena Vista Park; 662 feet of 6-inch in Centre Street, from Dana Street to Hancock Street, in place of 4-inch removed; 244 feet of 6-inch in Clark Street, from School Street to Main Street, in place of 4-inch removed, and 1,397 feet of 6-inch from Washington Street to Webster Avenue, in place of 4-inch removed; 248 feet of 6-inch in Clement Circle, from Sparks Street east; 636 feet of 6-inch in Cowperthwaite Street, from Banks Street to De Wolf Street, in place of 4-inch removed; 203 feet of 4-inch in Crossland Street, from Bristol Street to Clark Street, in place of 3-inch removed; 1,371 feet of 6-inch in De Wolf Street, from Flagg Street to Mt. Auburn Street, in place of 4-inch removed; 273 feet of 6-inch in Dodge Street, from Griggs Street to Western Avenue, in place of 4-inch and 1¼-inch removed; 2,285 feet of 6-inch in Elm Street, from Cambridge Street to Harvard Street, in place of 4-inch and 3-inch removed; 107 feet of 6-inch in Elmwood Street; 2,144 feet of 6-inch in the Esplanade of the Park Department; 38 feet of 12-inch in Everett Street, from Massachusetts Avenue east, in place of 12-inch removed; 1,358 feet of 6-inch in Fayette Street, from Broadway to Cambridge Street, in place of 4-inch removed; 162 feet of 6-inch in Felton Street, from Broadway north; 649 feet of 6-inch in Flagg Street, from De Wolf Street to Putnam Avenue, in place of 4-inch removed; 13 feet of 6-inch in Foster Street, from Lowell Street east; 791½ feet of 6-inch in Frost Street, from Harris Street to Roseland Street, in place of 4-inch removed; 22 feet of 6-inch in Garden Street, connecting Concord Avenue, and 10 feet of 6-inch connecting Mason Street; 413 feet of 6-inch in Gerry Street, from Mt. Auburn Street, in place of 3-inch removed, and 157½ feet of 6-inch, extension; 603 feet of 6-inch in Grant Street, from Banks Street to De Wolf Street, in place of 4-inch removed; 12 feet of 6-inch in Gray Street, from Martin Street; 495 feet of 6-inch in Hamilton Street, from Brookline Street to Pearl Street, in place of 4-inch removed; 389 feet of 6-inch in Hancock Street, from Centre Street to Harvard Street, in place of 4-inch removed; 19 feet of 6-inch in Harris Street, from Frost Street; 71 feet of 6-inch in Harrison Street, from School Street north; 34 feet of 4-inch in Holly Street, from Brooks Street to Clark Street, in place of 1½-inch removed, and 183 feet of 4-inch, extension; 305 feet of 6-inch in Hudson Street, from Bowdoin Street to Hudson Place; 97 feet of 4-inch in Inman Place, from Jones' Alley west; 27 feet of 6-inch and 170 feet of 4-inch in Irving Terrace, from Sumner Street east; 20½ feet of 4-inch in Jones' Alley; 177½ feet of 4-inch in King Street, from Walden Street; 244 feet of 4-inch in Kirkland Road, from Kirkland Street; 194 feet of 6-inch in Lafayette Square, in place of 4-inch removed; 97½ feet of 2-inch in Lincoln Place; 578 feet of 6-inch in Lincoln Street, from Elm Street to Winsor Street, in place of 3-inch and 4-inch removed, and 204 feet of 6-inch from Webster Avenue to Willow Street; 471 feet of 6-inch in Lopez Street, from Brookline

Street to Pearl Street, in place of 4-inch removed; 896 feet of 6-inch in Lowell Street, from Brattle Street to Mt. Auburn Street, in place of 4-inch removed; 27 feet of 6-inch in Madison Street, connecting Concord Avenue; 250 feet of 6-inch in Market Street, from Clark Street to Bristol Street (extension), and 932 feet of 6-inch from Elm Street to Bristol Street, in place of 3-inch and 4-inch removed; 532 feet of 6-inch in Martin Street, from Avon Street to Bowdoin Street, in place of 4-inch removed; 1,249 feet of 20-inch in Massachusetts Avenue from Everett Street to Holmes Place, in place of 12-inch removed, and 11 feet of 12-inch at Everett Street; 297 feet of 6-inch in Oxford Street (Ward 5), from Roseland Street south; 121 feet of 4-inch in Oxford Street (Ward 2), from York Street; 96 feet of 6-inch in Park Avenue; 255 feet of 6-inch in Portland Street, from Main Street south; 163 feet of 4-inch in Prentiss Place (extension); 158 feet of 6-inch in Prescott Street, from Broadway north; 1,204 feet of 6-inch in Rindge Avenue, from Clifton Street; 78 feet of 6-inch in Roseland Street, from Oxford Street west, and 203 feet of 6-inch from Frost Street, in place of 4-inch removed; 14 feet of 6-inch in Salem Street from Watson Street; 214 feet of 6-inch in School Street, from Austin Street to Pine Street, in place of 4-inch removed, and 262 feet of 6-inch, from Clark Street to Winsor Street, in place of 4-inch removed; 234 feet of 6-inch in Second Street, from Cambridge Street to Gore Street, in place of 3-inch removed; 190 feet of 6-inch in Sheridan Street, from Wood Street; 91 feet of 6-inch in Spring Street, from Third Street; 549 feet of 6-inch in Suffolk Street, from Columbia Street to Norfolk Street, in place of 4-inch removed; 634 feet of 6-inch in Sumner Street, from Cambridge Street to Kirkland Street, in place of 4-inch removed; 380 feet of 6-inch in Union Street, from Hampshire Street to Market Street, in place of 4-inch removed; 135 feet of 4-inch in Vandine Street, from Portland Street; 183 feet of 6-inch in Village Street, from Massachusetts Avenue so State Street, in place of 3-inch removed; 122 feet of 6-inch in Vineyard Street (extension); 33 feet of 6-inch in Ware Street, from Haavard Street, in place of 4-inch removed; 494 feet of 6-inch in Watson Street, from Brookline Street to Pearl Street, in place of 4-inch removed; 267 feet of 6-inch in Willow Street, from Lincoln Street to York Street, and 418 feet of 6-inch, from Lincoln Street to Palermo Street; 429 feet of 6-inch in Wood Street, from Sheridan Street to Walden Street; 536 feet of 6-inch in Worcester Street, from Columbia Street to Norfolk Street, in place of 3-inch removed; 513 feet of 6-inch in York Street, from Berkshire Street to Webster Avenue.

Total length of cast iron pipes laid during the year is 36,135 feet, or 6.8437 miles; renewals, 4.81 miles, extensions, 2.0337 miles; the weight of the metal was 596.98 tons.

The sizes of cast iron pipe laid during the year, their lengths and weights, are as follows: —

Size.	Length in Feet.	Weight in Tons.
20 inches	1,249	108.17
12 inches	49	1.90
6 inches	32,982½	471.18
4 inches	1,854½	15.73

In the two locations in Binney Street the eight-inch (8-in.) pipe has been offset, and in Hampshire Street the six-inch (6-in.) pipe has been offset for the accommodation of the Cambridge Gas Light Company.

At Massachusetts Avenue, corner of Albany Street, the twelve-inch (12-in.) pipe has been offset that the Sewer Department might have the customary location for its pipe.

In Inman Street, at Austin Street, the old three-inch (3-in.) main pipe has been capped. The Telephone Company required the location occupied by this pipe, which was abandoned in 1872 when the new twelve-inch (12-in.) was laid.

The six-inch (6-in.) main in Aberdeen Avenue has been raised.

The two-inch (2-in.) main in New Street has been relocated.

Supplies.

Two hundred twenty-eight (228) new supplies have been laid during the year.

Thirteen thousand, seven hundred forty-one (13,741) supplies have been laid to date, November 30, 1898.

Five hundred seventy-six (576) supplies have been renewed; of these thirty-three (33) were enlarged.

Two (2) supplies have been extended.

Sixty-one (61) supplies have been furnished with sidewalk shut-off boxes.

When laying the new and enlarged main pipes, the supply pipes were renewed where necessary, and, where requested by the owners of the property, extended on the premises, the owners paying the expense of such extension.

In many cases, included above, the supply pipes have been enlarged, the owners of the property bearing the cost of the additional expense in the street, and the total cost on the premises. Four hundred fifty-four (454) supplies were renewed under these conditions, as follows: Five (5) in Allston Street, one (1) in Antrim Street, nineteen (19) in Amory Street, twelve (12) in Arlington Street, five (5) in Banks Street, seven (7) in Beaver Street, four (4) in Boardman Street, five (5) in Bow Street, eight (8) in Brown Street, ten (10) in Centre Street, twenty-nine (29) in Clark Street, nineteen (19) in Cowperthwaite Street, eight (8) in Crossland Street, eleven (11) in DeWolf Street, eleven (11) in Dodge Street, forty-nine (49) in Elm Street, seven (7) in Fayette Street, nineteen (19) in Flagg Street, five (5) in Frost Street, eleven (11) in Gerry Street, eighteen (18) in Grant Street, seventeen (17) in Hamilton Street, ten (10) in Hancock Street, two (2) in Holly Street, two (2) in Hudson Street, two (2) in Irving Terrace, two (2) in Lincoln Place, six (6) in Lincoln Street, twenty-three (23) in Lopez Street, six (6) in Lowell Street, one (1) in Lafayette Square, twenty-three (23) in Market Street, three (3) in Martin Street, six (6) in Massachusetts Avenue, two (2) in Roseland Street, five (5) in Second Street, seven (7) in School Street, seventeen (17) in Suffolk Street, six (6) in Sumner Street, fifteen (15) in Union Street, eight (8) in Village Street, twelve (12) in Watson Street, and sixteen (16) in Worcester Street.

In Binney, Hampshire, Plymouth and Portland Streets, and Webster Avenue, the supplies have been offset for the Cambridge Gas Light Company; the cost of this work, as well as the expenses attending the changes in the main pipes in Binney and in Hampshire Streets, have been paid for by the Company.

In order to not trespass on the locations of the sewer at No. 158 Main Street and in New Street, the supplies have been changed.

On the premises of Harvard College on Kirkland Street in two locations supplies have been offset.

The original supply for Gregory Heirs on Boylston Street has been removed.

Supplies for J. M. Woods, Bridge Street, have been shut off at the main and abandoned. Commercial Avenue is to be built on this site.

The four-inch (4-in.) fire supply for the New York Biscuit Company on Franklin Street has been connected to the main in street.

At the opening of the season the service boxes in all parts of the City were examined and lowered in places where they had been raised by the action of the frost.

Where the grades of the streets have been changed the service boxes have received attention, as follows: In Berkshire and Hardwick Streets they have been raised, and in Buena Vista Park, Eaton Street and Ellsworth Avenue, lowered.

Fountains.

One ice water drinking fountain of Jenks' make has been set at the corner of Massachusetts Avenue and Blake Street.

There are now four (4) in use.

One drinking fountain of Jenks' make has been set in Wyeth Square.

There are twenty-four (24) drinking fountains in use.

Total number of drinking fountains in use in the City, twenty-eight (28).

Supply for fountain in Fresh Pond Drive, near Holworthy Street gate house, has been renewed.

The drinking fountains located as follows have received necessary repairs: Broadway and Norfolk Streets, Cambridge and Third Streets, Central Square, Lechmere Square, Rindge Avenue, Winsor Street.

Street Watering Standpipes.

There has been no addition during the year to the number of street watering standpipes.

The standpipe at the corner of Sherman and Walden Streets has been reset; it is now located on Walden Street about sixty (60) feet from Sherman Street.

At the opening of the season the standpipes received their annual inspection and were furnished, where needed, with new valves.

In cases where the valves were injured by frost after the standpipes had been put in thorough running order by the Water Department the expense of the repairs and new valves was met by the Street Department.

Gates.

One hundred thirty-two (132) gates have been set, as follows: One (1) 3-inch, thirty-six (36) 4-inch, ninety-two (92) 6-inch, one (1) 10-inch, one (1) 12-inch and one (1) 20-inch.

At the corner of Third and Charles Streets, in Harris Street, and in Lansdowne Street, new 4-inch gates have been set in place of old ones broken.

At the corner of Fairmont and Pleasant Streets, a broken 6-inch gate has been replaced by a new one.

In Mt. Auburn Street, corner of Lowell Street, the defective 10-inch gate has been removed; a new one has been set.

A 12-inch gate in Columbia Street has been repaired.

The gates in all parts of the City have been inspected and their locations marked.

Boxes.

One hundred twelve (112) iron gate boxes have been set on extension and renewal work; twelve (12) iron gate boxes on supply work, and on maintenance work, in place of old ones removed, eighteen (18) iron, eight (8) small and five (5) large wooden boxes, and nine (9) hydrant boxes have been set.

One (1) brick vault or gate box was built at the corner of Broadway and Elm Street for the new 20-inch gate.

Total number of boxes set, one hundred and sixty-five (165).

On account of the changes in the grades of the streets following, the boxes have been raised or lowered, *i. e.*—in Fayette Park, Main Street at First Street, and Rindge Avenue at Hollis Street, the gate boxes have been lowered; in Cambridge Street at Baldwin Street, in Dana Street, in Harvard Street at Dana Street, in Linnæan Street at Avon Street, in Mt. Auburn Street (Boston Elevated Railway Company's), in Massachusetts Avenue at Walden Street, and in River Street, the gate boxes have been raised.

Check Valves.

In the following streets the check valves have been removed: Arlington Street (6-inch), Bigelow Street (6-inch), Clinton Street (6-inch), Highland Avenue (6-inch), Lee Street (4-inch), Massachusetts Avenue at Pleasant Street (8-inch), and Massachusetts Avenue at Prospect Street (10-inch).

The clapper of 4-inch check valve in Linden Street has been removed.

Meters.

There are four hundred forty-seven (447) meters set in the City.

Ball and Fitts	5
Buffalo	1
Crown	45
Desper	1
Empire	2
Frost	3
Gem	1
Hersey	92
Nash	9
Thomson	8
Trident	59
Union Duplex	1
Union Rotary	61
Worthington	158
Weir	1
	447

The meters on the premises of John Quinn, Otis Street, and Chelmsford Foundry Company, on Portland Street, have been moved from the inside to the outside of the property.

Boston Woven Hose and Rubber Company has had its meter relocated (the 6-inch supply having been extended); and the meter at the Cambridge Electric Light Company's has been reset.

Hydrants.

Sixteen (16) hydrants have been added to the list this year.

Post hydrants have been set as follows: In Allston Street, corner of Brookline Street, Coffin; in Arlington Street, corner of Massachusetts Avenue, Coffin; in Appleton Street, corner of Concord Avenue, Perkins; in Binney Street, corner of Fifth Street, Coffin; in Broadway, corner of Jordan Place, Coffin; in Boardman Street, corner of Broadway, Coffin; in Banks Street, corner of Grant Street, Coffin; in Centre Street, near Dana Street, Coffin; in Cowperthwaite Street, corner of DeWolf Street, Coffin; in Clark Street, corner of Dickinson Street, Coffin; in Concord Avenue, near Buckingham Street, Perkins; in Dunster Street, corner of Massachusetts Avenue, Chapman; in Concord Avenue, near Craigie Street, Holyoke; in Everett Street, near Massachusetts Avenue, Coffin; in Fayette Street, near No. 38, Coffin; in Frost Street, near Roseland Street, Chapman; in Garden Street, at Walden Street, Coffin; in Glenwood Street, at Magazine Street, Coffin; in Grant Street, at DeWolf Street, Coffin; in Hamilton Street, at Brookline Street, Coffin; in Lowell Street, at Foster Street, Coffin; in Massachusetts Avenue, opposite Waterhouse Street, Coffin; in Massachusetts Avenue, at Jarvis Street, Coffin; in Mt. Auburn Street, at Sparks Street, Coffin; in Market Street, corner Elm Street, Coffin; in Market Street, corner Union Street, Coffin; in Portland Street, near Main Street, Coffin; in Rindge Avenue, west from Clifton Street, two Coffin; in River Street, opposite Fairmont Street, Perkins; in Sumner Street, near Irving Terrace, Coffin; in Sheridan Street, opposite Wood Street, Coffin; in Suffolk Street, midway, Coffin; in Willow Street, near Lincoln Street, Coffin; and in Worcester Street, near Columbia Street, Coffin.

Total number of post hydrants set, thirty-five (35), as follows: Two (2) Chapman, twenty-nine (29) Coffin, one (1) Holyoke and three (3) Perkins.

Flush hydrants have been set as follows: In Davis Street, corner of Broadway, and in Massachusetts Avenue, opposite Tannery Street.

Total number of flush hydrants set, two (2).

Total number of hydrants (post and flush) set, thirty-seven (37).

Post hydrants have been removed, as follows: In Ash Street, on land taken by the City for park purposes, Chapman; in Buckingham Street, near Concord Avenue, Perkins; in Dunster Street, corner of Massachusetts Avenue, Perkins; in Mt. Auburn Street, near Sparks Street, Perkins; and in River Street, opposite Fairmont Street, Holyoke.

Total number of post hydrants removed, five (5), as follows: One (1) Chapman, one (1) Holyoke and three (3) Perkins.

Flush hydrants have been removed, as follows: In Brookline Street, corner of Allston Street; in Brookline Street, corner of Hamilton Street; in Broadway, corner of Boardman Street; in Banks Street, corner of Grant Street; in Centre Street, corner of Dana Street; in Concord Avenue, opposite Craigie Street; in Davis Street, corner of Broadway; in Frost Street, corner of Roseland Street; in Grant Street, corner of DeWolf Street; in Massachusetts Avenue, at Arlington Street; in Massachusetts Avenue, corner of Jarvis Street; in Massachusetts Avenue, opposite Tannery Street; in Market Street, corner of Elm Street; in Market Street, corner of Union Street; in Otter Street, corner of DeWolf Street; and in School Street, corner of Clark Street.

Total number of flush hydrants removed, sixteen (16).

Total number of hydrants (post and flush) removed, twenty-one (21).

Total number of hydrants in Cambridge, nine hundred twenty-two (922); of these, ten (10) Chapman in Potter Street and two (2) Chapman in Binney Street are the property of the American Rubber Company.

Below find styles and number.

Boston	158
Chapman	401
Coffin	40
Flush	143
Holyoke	88
Perkins	92
	922

Two post hydrants have been broken by teams. One (Chapman) has required a new frost case, etc., only; and one (Perkins), at the corner of Mt. Auburn and Sparks Streets, has been replaced by a new Coffin.

Defective hydrants, as follows, have been repaired in their locations at corner of Cambridge and Eighth Streets, Cambridge and Third Streets, Harvard and Bigelow Streets, Main and Portland Streets, Massachusetts Avenue and Frank Street, Massachusetts Avenue and Chester Street, Massachusetts Avenue and Linnæan Street, Elm Street, and Sparks Street.

On account of change of grade of streets or curbstones, the hydrants have been reset in Banks Street, in Cambridge Street at Holmes Place, in Cambridge Street at Felton Street, in Dunster Street at Massachusetts Avenue, and Reservoir Street at Highland Street.

Drains have been laid and the wastes of the hydrants, following, connected to the sewer: Hancock and Harvard Streets, Humboldt and Lancaster Streets, and Huron Avenue and Wyeth Streets.

Stony Brook.

All the stone work joints about the gate house and overflow have been pointed with Portland cement.

It will be necessary the coming year to build several hundred feet of wire fence near the upper end of the reservoir on the easterly side to prevent cattle from getting to the basin.

Table Showing the Daily Average Number of Gallons, by the Month, Flowing Over the Waste Way at Stony Brook.

	Gallons.	Number of Days.		Gallons.	Number of Days.
Dec., 1897.....	13,477,419	31	June, 1898.....	3,886,666	17
Jan., 1898.....	13,890,322	31	July, 1898	No overflow.	
Feb., 1898.....	33,150,000	28	Aug., 1898.....	3,648,387	15
March, 1898.....	33,854,839	31	Sept., 1898.....	53,333	4
April, 1898.....	25,083,333	30	Oct., 1898.....	9,496,774	12
May, 1898.....	19,758,065	31	Nov., 1898.....	32,926,666	30

Total quantity wasted . . . . . 5,701,600,000 gallons.

Total number of days in which water wasted 260

Stony Brook Pipe Line.

The pipe line has been examined, as usual, and all air valves and blowoffs opened as needed. The discharge from this main seems to be decreasing more rapidly than it should and as there are several depressions in the line where an accumulation could take place, and in view of the fact that the screens in the gate house have been broken and a large amount of leaves, etc., carried into the pipe, I would recommend that an internal examination of this line be made this year by cutting in at different points with the A. P. Smith tapping machine and putting on manhole covers.

Hobbs Brook.

The land along the borders of the basin between Lexington Street and Winter Street dam has been graded and part of it seeded down.

The land along Winter Street has been partly graded and a low place near the new road has been filled.

Nineteen hundred (1,900) feet of fence extending from the Winter Street dam along Winter Street to the land of A. J. Merrill has been built.

The overflow from the Winter Street dam has been carried to the brook below the dam.

A large amount of dead wood has been cut around the basin and the premises much improved.

I would recommend that the coming year, should the conditions be favorable, the meadows above the old ice house be ditched and the water courses cleaned out.

Recapitulation.

New Supplies.

	6 Inch	4 Inch	3 Inch	2 Inch	1½ Inch	1¼ Inch	1 Inch	¾ Inch	Total
Length in feet, of pipe	357	143	41½	416	267½	116½	4,318	6,526½	12,186
Number of supplies	3	5	1	9	7	2	37	164	228
Number of stop and waste valves	....	....	....	9	7	1	32	165	214
Number of screw cocks	....	....	....	8	7	2	47	163	227
Number of sidewalk cocks	....	....	....	....	....	2	36	163	201
Number of service boxes	....	....	....	....	....	....	....	....	208
Number of gate boxes	....	....	....	....	....	....	....	....	12
Number of wooden boxes	....	....	....	....	...	....	....	....	18

Main Pipe.

	20 Inch.	12 Inch.	6 Inch.	4 Inch.	2 Inch.	1¼ Inch.	Total.
Length, in feet, of iron pipe (extensions)	.....	.....	9,131½	1,606½	97½	210	11,045½
Length, in feet, of iron pipe, (renewals)	1,249	49	23,851	248	.....	.....	25,397
Total length, in feet, of iron pipe	1,249	49	32,982½	1,854½	97½	210	36,442½
Number of gates	1	1	86	25	.....	.....	113
Number of hydrants	.....	.....	.....	.....	.....	.....	31

Comparative Trenching for the Past Nine Years.

	Extensions.	Renewals.	Supplies.	Total Feet.	Miles.
1890.....	11,713½	1,929	15,525	29,167½	5.52
1891.....	9,858½	2,958	17,864	30,680½	5.81
1892.....	16,784½	13,628	16,013	46.425½	8.79
1893.....	18 380½	11,008½	14,233½	43,622½	8.26
1894.....	13,673	17,481½	17,211	48,365½	9.16
1895.....	11,083	15,638½	22,266	48,987½	9.27
1896.....	17,421	26,243	17,361	61,025	11.55
1897.....	11,268	36,967½	16,121½	64,357	12.19
1898.....	11,045½	25,397	12,186	48,628½	9.21

Conclusion.

Following will be found the Engineer's report.

All of which is respectfully submitted,

E. C. BROOKS,

Superintendent.

REPORT OF THE PUMPING ENGINEER

DECEMBER 1, 1898.

To the Honorable the Water Board of the City of Cambridge:—

GENTLEMEN:—From May 1st, the date of my appointment as chief engineer at the pumping station, the new twenty million gallon Leavitt pumping engine was run at intervals, as repairs on the pumping station would permit, until June 1st, when the engine was put to regular work and has run very satisfactorily to this date, with no trouble whatever.

Nos. 1 and 2 Worthington engines and No. 4 Blake engine are in first-class condition, ready to run in one hour's notice if anything should happen to No. 7.

The new electric light plant was started May 12th, running daily since that date, doing all that was expected of it.

The steam pipe in the engine-room for engines Nos. 1 and 2 has been covered with black walnut lagging; this completes all the new work in the main engine-room.

The electric device for showing height of water at the reservoir has arrived at the station and will be put in operation soon.

Aside from piping up the pump and receiver, which I understand is ordered, and making a few changes on piping in the fire-room for the testing engine and boilers, the plant is complete and in first-class condition.

Respectfully submitted,

E. I. HARRIS,
Engineer.

Engine Record, Pond Levels and Rainfall.

Date.	Low Service Engines.						High Service Engines.			Engine No. 7.			Total Water Pumped.	Daily Average Water Pumped.	Total Coal Consumed.	Daily Average Coal Consumed.	Average Height of Pond.	Rainfall.
	Engine No. 1.			Engine No. 2.														
	Running Time.		Water Pumped.	Running Time.		Water Pumped.	Running Time.		Water Pumped.	Running Time.		Water Pumped.						
1897.	Hrs.	Min.	Gallons.	Hrs.	Min.	Gallons.	Hrs.	Min.	Gallons.	Hrs.	Min.	Gallons.	Gallons.	Gallons.	Lbs.	Lbs.	Ft.	In.
December..	—	—	—	433	15	181,200,800	744	—	24,110,460	9	—	5,492,080	210,803,340	6,800,108	368,400	11,884	15.60	4.31
1898.																		
January....	—	—	—	451	15	195,653,150	732	45	32,803,110	9	45	6,682,280	235,138,540	7,585,114	397.800	12,832	15.74	4.75
February ..	394	20	103,314,600	180	15	78,904,650	671	35	39,706,650	—	—	—	221,925,900	7,925,925	454,900	16,246	15.93	3.61
March.....	556	05	142,162,500	94	45	22,343,400	650	45	38,398,815	41	45	25,895,760	228,800,475	7,380,660	489,800	15,800	16.38	2.03
April.....	—	—	—	—	—	—	—	—	—	336	25	212,361,600	212,361,600	7,078,720	268,800	8,960	16.72	6.22
May.....	59	15	18,615,300	360	45	88,267,800	291	—	18,221,400	138	15	89,968,560	215,073,060	6,937,841	420,025	13,549	16.95	3.92
June.....	—	—	—	—	—	—	—	—	—	322	05	241,610,160	241,610,160	8,053,672	321,714	10,724	16.96	1.82
July.....	—	—	—	—	—	—	—	—	—	314	10	250,865,560	250,865,560	8,092,437	327,550	10,566	16.21	4.50
August.....	—	—	—	—	—	—	—	—	—	336	05	265,579,600	265,579,600	8,567,084	341,719	11,023	16.04	7.34
September.	—	—	—	—	—	—	—	—	—	287	05	229,313,920	229,313,920	7,643,797	307,750	10,258	15.70	1.78
October	22	30	5,573,400	75	—	19,233,900	99	30	6,522,255	272	45	228,816,720	260,146,275	8,391,815	376.750	12,121	15.43	7.22
November..	—	—	—	—	—	—	—	—	—	254	—	220,702,680	220,702,680	7,356,756	297,600	9,920	15.84	4.92
Total.....	1,032	10	269,665,800	1,595	15	585,603,700	3,189	35	159,762,690	2,321	20	1,777,288,920	2,792,321,110	—	4,372,808	—	—	52.42
Daily Av....	2	50	738,810	4	22	1,604,394	8	44	437,706	6	22	4,869,285	7,650,195	—	11,980	—	16.13	—

REPORT OF THE BOARD OF PARK COMMISSONERS

To the Honorable the City Council of the City of Cambridge:—

GENTLEMEN:—The Board of Park Commissioners has the honor to submit herewith its sixth annual report, for the year ending November 30, 1898, and also the fifth annual report of the General Superintendent of Parks, as required by Section 4 of the Ordinance establishing a Park Department.

On May 3, 1898, the Board submitted the following recommendation:—

CAMBRIDGE, May 3, 1898.

To the Honorable the City Council of the City of Cambridge:—

GENTLEMEN:—The Park Commissioners recommend that the betterments assessed upon the lands of Harriet A. Porter adjoining the Esplanade and certain streets as specified in the accompanying order, to be assumed by the City, in consideration of and upon the conveyance by her to said City of certain of her lands near said Esplanade.

Respectfully,

GEO. HOWLAND COX,
President of the Board.

In accordance with above recommendation, the following order was adopted May 4, 1898, and approved by the Mayor May 11, 1898.

Ordered:—That His Honor, the Mayor, be and hereby is requested and authorized for and in behalf of the City of Cambridge to enter into an agreement with Harriet A. Porter to the effect that in consideration of and upon the conveyance by her to said City of certain of her lands near the Esplanade and near lands of the Charles River Embankment Company and others, shown as streets on a plan entitled "Plan of Land Conveyed to City of Cambridge by the Charles River Embankment Company *et al.*, by deed dated October 18, 1897," the City will assume any betterments assessed and that may be assessed upon other land of said Harriet A. Porter adjoining said streets and adjoining said Esplanade, shown upon said plan, by reason of the laying out and construction of said Esplanade; and further, that the City will agree that whenever a building or buildings may be erected upon said land, abutting upon such streets to be conveyed as aforesaid, and when said building or buildings shall be ready for occupancy that it will immediately upon notice thereof in writing by said Harriet A. Porter put the streets upon which said building abuts in order for public travel from the said buildings to an existing public thoroughfare within a reasonable time.

On July 5, 1898, the Board submitted the following report and recommendations:—

CAMBRIDGE, July 5, 1898.

To the Honorable the City Council of the City of Cambridge:—

GENTLEMEN:—The Board of Park Commissioners respectfully recommend to the City Council, that the City take, under the authority granted by Chapter 341 of the Acts of 1892, entitled "An Act to authorize the City of Cambridge to lay out and maintain public parks," and Chapter 337 of the Acts of 1893, amendatory thereto, the parcels of land described in the accompanying order, lying on the easterly side of Bath Street.

The Commissioners recommend this taking in order to enable them to construct a more suitable approach to the River Parkway from Mt. Auburn Street than at present exists. This construction is recommended by the Landscape Architects, and involves the widening of a portion of the present Bath Street on its easterly side.

Respectfully,

GEO. HOWLAND COX,
W. M. RICHARDSON, } *Park Commissioners.*

The following order for taking the land recommended in above report was adopted by both branches of the City Council July 5, 1898, and approved by the Mayor July 6, 1898.

IN BOARD OF ALDERMEN, July 5, 1898.

Whereas, by Chapter 341 of the Acts of the Legislature of the Commonwealth of Massachusetts for the year 1892, entitled "An Act to authorize the City of Cambridge to lay out and maintain public parks," and accepted by the City Council of the City of Cambridge, by a resolve approved June 15, 1892, and by Chapter 337 of the Acts of the Legislature for the year 1893, amendatory of said Chapter 341, it is provided that said City "by its City Council at any time after the passage of this Act may take and hold by purchase or otherwise, any and all such real estate and lands within said City as it may deem advisable, upon the recommendations of the Board of Park Commissioners hereinafter mentioned, and may lay out and maintain and improve the same as a public park or parks"—and

Whereas, It is deemed advisable upon the recommendation of said Board of Park Commissioners that the City should, under the provisions of the aforesaid acts, take and hold for the purpose of improving the same as a public park or parks, the several lots or parcels of land hereinafter bounded and described, and

Whereas, "An appropriation sufficient to cover the estimated expense thereof" has been duly made by the City Council, as required by Section 3, of the aforesaid Chapter 337, of the Acts of the Legislature of 1893,—

Now, therefore, be it known, that by virtue and in pursuance of the authority conferred by said acts of the Legislature, and by every other power and authority it hereto enabling, the City of Cambridge, by its City Council, does hereby take for the purpose aforesaid the following described lots or parcels of land, all situated within the limits of said City, to wit:—

All the lands with the buildings thereon, bounded and described as follows:

Beginning at the intersection of the easterly line of Bath Street with the proposed park line, which intersection is 5.00 feet southerly measured on said easterly line of Bath Street from a stone bound at the intersection of said easterly line of Bath Street with the division line between land of Annie

Coleman and land of heirs of George O. Danforth; thence running southerly along said easterly line of Bath Street 193.34 feet to a tangent point of a curved line of 30 feet radius in the present park line; thence southerly and southeasterly along said curved line 31.19 feet to a point of reversed curve with a curved line of 5,581.73 feet radius; thence southeasterly along said curved line 351.68 feet; thence northwesterly along the proposed park line 80.00 feet to a point of curve with a curved line of 1,400 feet radius; thence northwesterly along said curved line 234.68 feet to a compounding point with a curve of 172.31 feet radius; thence northwesterly and northerly along said curved line 139.38 feet to a tangent point; thence northerly 89.14 feet to the intersection of the proposed park line with the easterly line of Bath Street at the point of beginning, containing 6,988 square feet.

The foregoing described lands are shown upon a plan entitled "Plan of Land Taken for Park Purposes at the South End of Bath Street," dated July 1, 1898, drawn and signed by Lewis M. Hastings, City Engineer, and on file in the office of the City Engineer, a copy of which plan is to be recorded in the Middlesex South District Registry of Deeds, reference to which is hereby made for a more particular description of the lots taken, and said lands are supposed to belong to the persons hereinafter named, to wit:—

A parcel of land supposed to belong to Annie Coleman, bounded as follows:

Beginning at the intersection of the easterly line of Bath Street with the proposed park line, which intersection is 5.00 feet southerly, measured on said easterly line of Bath Street from a stone bound at its intersection with the division land between land of Annie Coleman and land of heirs of George O. Danforth; thence running southerly along said easterly line of Bath Street 29.41 feet to an angle, thence southerly again 9.01 feet on the easterly side of Bath Street to its intersection with the division line between land of Coleman and land of Ellen M. Dinsmore, thence southeasterly along said division line 8.45 feet to its intersection with the proposed park line, thence northerly along said park line 39.78 feet to its intersection with the easterly line of Bath Street at the point of beginning, containing 184 square feet.

A parcel of land supposed to belong to Ellen M. Dinsmore, bounded as follows, viz.:—

Beginning at the intersection of the easterly line of Bath Street with the division line between land of Ellen M. Dinsmore and land of Annie Coleman, and running southerly along said easterly line of Bath Street 32.34 feet to its intersection with the division line between land of Dinsmore and land of the Cambridge Gas Light Company; thence easterly along said division line 11.37 feet to its intersection with the proposed park line; thence northerly along said park line 33.02 feet to its intersection with the division line between land of Dinsmore and land of Coleman; thence northwesterly along said division line 8.45 feet to its intersection with the easterly line of Bath Street at the point of beginning, containing 315 square feet.

A parcel of land supposed to belong to the Cambridge Gas Light Company, bounded as follows, viz.:—

Beginning at the intersection of the easterly line of Bath Street with the division line between land of Cambridge Gas Light Company and land of Ellen M. Dinsmore, and running southerly along said line of Bath Street 83.15 feet to its intersection with the division line between land of Gas Company and land of Ellen O'Hara, thence southeasterly along said division line 24.42 feet

to its intersection with the proposed park line, which line is a curved line of 172.31 feet radius, thence northerly along said curved line 72.23 feet to a tangent point, thence northly again on the proposed park line 16.34 feet to its intersection with the division line between land of Gas Company and land of Ellen M. Dinsmore; thence northwesterly along said division line 11.37 feet to its intersection with the easterly line of Bath Street at the point of beginning, containing 1,113 square feet.

A parcel of land supposed to belong to Ellen O'Hara, bounded as follows, viz.: —

Beginning at the intersection of the easterly side of Bath Street with the northerly division line between land of Ellen O'Hara and land of Cambridge Gas Light Company, and running southerly 36.47 feet to its intersection with the southerly division line between land of O'Hara and land of Gas Company; thence southeasterly along said division line 56.00 feet to its intersection with the proposed park line, which line is a curved line of 172.31 feet radius; thence northerly along said curved line 53.66 feet to its intersection with the division line between land of O'Hara and land of Gas Company, thence northwesterly along said division line 24.42 feet to its intersection with the easterly line of Bath Street at the point of beginning, containing 1,353 square feet.

A parcel of land supposed to belong to the Cambridge Gas Light Company, bounded and described as follows, viz.: —

Beginning at the intersection of the easterly line of Bath Street and the present park line with the division line between land of Cambridge Gas Light Company and land of Ellen O'Hara, and running southerly along said present park line 2.96 feet to a tangent point in said line; thence southerly and southeasterly along said line 31.19 feet to a point of reversed curve, said line being a curved line of 30 feet radius; thence southeasterly along said park line 351.68 feet to a compounding point, said line being a curved line of 5,581.73 feet radius; thence northwesterly along the proposed park line 80.00 feet to a point of curve with a curved line of 1,400 feet radius; thence northwesterly 234.68 feet along said curved line to a point of compound curve with a curve of 172.31 feet radius; thence northwesterly along said curved line 13.49 feet to its intersection with the division line between land of Gas Company and land of O'Hara; thence along said division line 56.00 feet to its intersection with the easterly side of Bath Street and the present park line at the point of beginning, containing 4,023 square feet.

So, therefore, be it known, that the several parcels of land, together with all the buildings and structures thereon, hereinbefore mentioned and particularly described, on this fifth day of July, A. D. 1898, are hereby taken by the City of Cambridge as aforesaid, for the purpose hereinbefore set forth, assessments for the cost and expenses thereof to be laid under the provisions of Sections 6 and 7 of said Chapter 341 of the Acts of 1892; and it is hereby

Ordered, That in accordance with the requirements of Section 2 of said Chapter 341 of the Acts of the year 1892, hereinbefore mentioned, the City Clerk be and hereby is directed to cause to be recorded in the Registry of Deeds of the Southern District of the County of Middlesex, a description of the aforesaid taking sufficiently accurate for identification, with a statement of the purpose for which the same were taken, which statement shall be signed by the Mayor.

On September 27, 1898, the Board submitted the following report and recommendation: —

CAMBRIDGE, September 27, 1898.

To the Honorable the City Council of the City of Cambridge:

GENTLEMEN:—The Park Commissioners respectfully recommend to the City Council that the City discontinues that portion of Bath Street lying between Mount Auburn Street and Charles River Road.

The owners of the land abutting on this portion of Bath Street have agreed to deed to the City any right or fee which they may have in said portion of Bath Street.

Respectfully,

H. E. WHITING,
Clerk of the Board.

The following order for discontinuing the street and for taking the land recommended in above report was adopted by both branches of the City Council December 6, 1898, and approved by the Mayor December 7, 1898.

IN BOARD OF ALDERMEN, December 6, 1898.

Whereas, It is adjudged by this Board to be necessary that a certain portion of Bath Street, now under the control of the board of Park Commissioners of the City of Cambridge, should be discontinued, and

Whereas, due notice has been given, according to law, of the intention of this Board to discontinue the aforesaid portion of Bath Street, hereinafter described and bounded, as a public way of the City of Cambridge, and

Whereas, James D. Hill, Elizabeth F. Hill, B. Otis Danforth, Executor, and George P. Bemis, Trustee, being all the several owners of land abutting on the said portion of Bath Street to be discontinued as aforesaid, have by the accompanying instrument, and for sufficient consideration duly remised, released and forever quit-claimed unto the City of Cambridge the land included within the area of the aforesaid portion of Bath Street, so to be discontinued, it is hereby

Ordered:—That so much of said Bath Street as lies between Mount Auburn Street and a point about two hundred and nine and forty-two hundredths (209.42) feet southerly, be and the same hereby is discontinued as a public way the portion of said street so discontinued as a public way being bounded and described as follows:—

Beginning at a point in the present southeasterly line of Bath Street at its intersection with the southerly line of Mount Auburn Street; thence southwesterly along said line of Bath Street about two hundred and nine and forty-two hundredths (209.42) feet to its intersection with the proposed new easterly line of Bath Street; thence northerly along said proposed new easterly line about fifty-one (51) feet to its intersection with the present northwesterly line of Bath Street; thence northeasterly along said present northwesterly line of Bath Street, parallel to and thirty (30) feet distant northwesterly from the present southeasterly line of Bath Street about one hundred and thirty and six-tenths (130.6) feet to its intersection with the southerly line of Mount Auburn Street; thence easterly along said southerly line of Mount Auburn Street about fifty-three and seven-tenths (53.7) feet to its intersection with the present southeasterly line of Bath Street at the point of beginning; containing about fifty-one hundred (5,100) square feet.

The above described parcel of land is shown on a plan entitled "City of Cambridge: Park Department, Plan of Land Taken for Park Purposes at the South End of Bath Street," drawn by L. M. Hastings, City Engineer, dated July 1, 1898, and on file in the office of the City Engineer, Cambridge, Mass.

Construction.

Section A. Esplanade Extension, East.

During the year the sea wall has been completed and properly ballasted. A contract was made with the New England Dredging Company to fill the Esplanade to grade 21, Cambridge base, for the sum of twelve and one-fourth cents per square foot. The owners of the adjacent flats made a similar contract with the same company at the same time. It is probable that the entire filling will be done by February 1, 1899. The areas enclosed and filled are as follows, viz:—

Esplanade	471,360	square	feet.
Private lands	793,703	"	"
City lots	46,626	"	"
Total	1,311,689	"	"

The cost of this Esplanade extension, including wall, foundations, ballast and filling, will be about $148,500.00, or 31½ cents per square foot. The cost of the roadway, walks, lawns, and planting will be about 6 cents per square foot additional.

Section B. Esplanade.

The Esplanade for a distance of one thousand feet either side of Massachusetts Avenue has been treated during the year; the lawns and driveways completed, and many trees set out. The surface drains and catch basins have been put in and the sidewalks brought to finished grade. It is probable that the early spring will witness the beginning of building operations.

Section D. Brookline Street to River Street.

The roadway across the marsh from Brookline Street to Magazine Street Extension has been filled and brought to grade, and Magazine Street also filled and brought to its proper width. The filling was taken from the bed of the river and is a clean gravel admirably suited for the purpose of road building. A play-ground has been leveled and put in condition for use, which will be of great service to the boys of Ward Four.

A dyke which will follow the shore of the river to Brookline Street is being constructed and will enclose the entire play-ground.

All of the areas east of Magazine Street will be thoroughly drained and the salt marshes thereby gradually changed to fresh water meadows.

The adaptability of the shore at the foot of Magazine Street for bathing is such that it would be a wise provision for the city to cause to be erected such a bath house as would accommodate the large number of people who use the river for bathing purposes. A bath house erected on the shore would be cheaper both in construction and in maintenance than the floating bath houses such as are in use at the bridges. A clean gravel beach is much more desirable, and at this point is easily attainable.

Section E. River Street to Western Avenue.

The Park Commissioners have given careful consideration to alternative schemes of making the connection between River Street and Western Avenue, and will later recommend to the City Government that the driveway be continued along the river, in the rear of the buildings of the Riverside Press and the Electric Light Company.

Section F. Western Avenue to Boylston Street.

The roadway and planting spaces east of Boylston Street as far as the canal at Richardson & Bacon's coal wharf have been completed. The balance of the tree planting will be done in the spring and the shore regraded.

Extensive alterations have been made to the Weld Boat Club House, and the building is architecturally much improved. No work has been done between Richardson & Bacon's wharf and Western Avenue.

Section G. Boylston Street to Cambridge Hospital.

The attention of the Commissioners has been given to the completion of this section of the river park. The road from Boylston Street has been graded and resurfaced; the loam and planting spaces completed; Bath Street widened and regraded and made part of the park driveway, which in the future will be known as the Charles River Road. The driveway is well lighted and policed, and its completion serves to illustrate to our citizens the possibilities for usefulness and beauty which some day will be found along the entire Cambridge bank of the river.

Section H.

In the report for 1897 the Board stated that it was proposing to enter into some arrangement with the trustees of the Cambridge Hospital, to extend the present park beach along the Hospital shores, with a path for foot travel as far as Gerry's Landing. In the press of other matters no progress has been made in the way of negotiations. Surveys and sketches of the proposed extension have been made, however, and the Board expects to undertake and complete the necessary negotiations before spring.

It may not be generally known, but it is a fact, that the plans of the Metropolitan Park Commissioners for the speedway and river drive on the Longfellow marsh include a bridge over the river at Gerry's Landing. The purpose of your Board is to carry its work to the bridge. From Gerry's Landing up, the Metropolitan Park Commissioners have taken the water front, so that the bridge or landing marks the westerly limit of our river work.

It seems to the Board to be very important that this section of the park work should be undertaken. The whole triangle bounded by the river, Mt. Auburn Street and the road to Gerry's Landing is now in the public hands. Such portion as is not occupied by the Hospital, the College infirmary and the Home for Aged Couples, is owned by the State and will be improved by it for park purposes. All that we are called on to do is to treat the short stretch of unsightly, unhealthy and foul-smelling mud banks as we have done on the section below, and thus carry our work to its natural termination.

Cambridge Field.

This large playground and park has been extensively used throughout the year and continues to be a source of pleasure and benefit to a large community.

The increase in real estate values in the immediate neighborhood due to the building of this park is shown by the following figures:—

	Value of Land.	Value of Buildings.	Total Value.	Gain.
1893	$403,100	$533,000	$936,100	
1896	442,000	650,000	1,092,000	$155,900
1897	475,400	1,051,800	1,527,200	435,200
1898	487,600	1,174,000	1,661,600	134,400
Total gain in five years				$725,500

The interest and sinking fund charges in 1898 on the cost of Cambridge Field, to be raised from taxation, were $12,000.00. The amount received by the City in 1898 from taxes on the above increase was $11,898.20, showing that the Field is practically self-supporting.

Rindge Field.

The Board has had plans submitted for the permanent treatment of Rindge Field, and has laid out and built the streets bordering on the Field, which have been named Groveland, Pemberton and Yerxa Roads, respectively. It is the purpose to surface these roads with a good quality of gravel, which will serve the requirements of ordinary use for some time.

About 14,300 feet of land on the corner of Groveland Road and Rindge Avenue is occupied by the Wyman School. Steps should be taken in the immediate future to secure another lot for this school building, as the land now occupied by it will be needed to complete the park.

East Cambridge Embankment.

It is quite probable that it will be necessary to complete the extension of Commercial Avenue to the canal during the year and at the same time do as much filling as is possible with such material as can be purchased at an advantage to the City.

Commons and Squares.

The only important work done during the year was the rebuilding of Hastings Square. This work was earnestly requested by many citizens of Ward Four and the results obtained certainly endorse the wisdom of their request.

Cambridge Common.

The propriety of maintaining a ball ground on the common has been seriously questioned by the Commissioners. They recognize that almost from time immemorial it has been used for such purpose, and that a presumptive right so to use it might be claimed. They recognize, also, the fact that there are too few places in Cambridge where boys and men can indulge in such sports, and that there is no other place in that part of Cambridge, except Rindge Field, but which is not as conveniently located.

On the other hand, the Commissioners are aware that the ball ground is so situated that the noises caused by the players and spectators, the dangers to passers-by on the abutting streets and on the paths of the common, the language that accompanies the playing, the presence of crowds of spectators on occasions of particular interest, the unsightliness of that part of the common used for the purpose and arising from such use, constitute strong objections to its continuance in the minds of the neighbors and those having occasion to use the streets and paths, and demand that some change be made. The Commissioners have considered the advisability of prohibiting all play, and restoring that part of the common to a normal condition, as well as the advisability of relocating the ball ground so as to diminish the objections named. The former plan is effective, the latter is partially remedial. The former involves little expense, except seeding, the latter involves a large outlay for relocation of several existing paths, removal of many large trees, and the necessary care, maintenance and policing.

The Board invites suggestions from all citizens interested.

Shade Trees.

The usual amount of work has been done on the shade trees in the way of removals and renewals, as well as in protecting them from horses by the use of wire guards. The latter would be of greater value if the small boys' attention could be distracted from them. Destruction of the guards seems to offer every inducement to the boys, of which they are not slow to take advantage.

In the matter of the trimming of our trees, we are sadly behind other cities. So long as the appropriations for maintenance are less than our needs, it is evident that something has to be left undone, consequently that which is a luxury has to yield to the necessities: *e. g.*, our parks need the lawn mowers and policemen more than the trees demand trimming. The result is not satisfactory, but unavoidable.

Schoolhouse Grounds.

Attention is again brought to the deplorable condition of the schoolhouse grounds. It is true that the Park Department has made a beginning in the work of improving and adorning them, but the appropriation for maintenance of shade trees and public grounds is too small to admit of the use of but a small amount of money each year for this purpose.

To put all the grounds in an acceptable condition will require the expenditure of about $10,000. The Board therefore suggests than an annual appropriation of at least $1,000 be made to be expended by this Department in this work. The Board suggests, also, that when the grounds are put in proper order the janitor of each schoolhouse be required, as one of his duties, to maintain them in good order.

Extension of the Esplanade.

The Board has practically finished such work as has been heretofore begun on the various sections of the river front, and brought the same to a substantial completion. During the coming year, in addition to the small balance remaining unexpended of this year's appropriation, the sum of $100,000 will be available for construction purposes, being the last instalment of the $500,000 authorized by the Act of 1894. With a large part of our river frontage as yet uncompleted, but with sufficient to enable anyone to determine the character of the development, its effect upon neighboring property, and our inhabitants and visitors, the question arises as to what work should be undertaken during the coming year.

The first consideration to present itself to the Board is whether it should make its recommendations upon the assumption that substantially all construction work is to cease indefinitely upon the exhaustion of the legislative appropriation at the end of the coming year, or whether it should assume that the City will ask the Legislature for authority to issue additional loans for the purpose of continuing and finishing the work. It is for the City, and not for the Board, to decide this question. The Board can only state its views and recommendations for the City to act upon. A brief review of the situation, therefore, may not be out of place.

In 1893 the Legislature authorized the City to issue bonds not exceeding $500,000 for the purpose, not expressly named in the Act but understood, of

taking and developing the river front, and other open spaces. In 1894 an additional loan of $500,000 was authorized for the same purpose. About $900,000 has been expended, and a little over $100,000 is still available. In 1897 a loan of $100,000 was authorized for the purpose of constructing the sea wall from West Boston Bridge to the Embankment Company's wall, and for filling the adjacent park reservation. By the expenditure of this amount, $1,000,000, Cambridge field has been completed, the small squares like Dana, Hastings, Broadway and Winthrop, have been remodeled, Rindge Field has been acquired and some work done, schoolhouse and public grounds have been improved, shade trees planted, and the whole stretch of river front from West Boston Bridge to Cambridge Hospital, with the exception of the Riverside Press and Electric Light property between River Street and Western Avenue, which the Commissioners have decided to recommend taking next year, has been acquired, together with the Front, so called, on the East Cambridge side of West Boston Bridge. On this frontage a sea wall has been built from near Craigie Bridge to within 1,100 feet of West Boston Bridge, and from West Boston Bridge to a point about 2,230 feet west of Harvard Bridge; a stretch of 1,000 feet on either side of the bridge has been laid out, trees planted and planting spaces sown, a dyke and play-ground have been nearly completed at the foot of Magazine Street, and a completed park and riverway constructed and opened from Richardson & Bacon's coal wharf east of Boylston Street, to Cambridge Hospital.

There remains uncompleted Section A, so-called, from West Boston Bridge to land of the Charles River Enbankment Company, about 2,010 feet of Section B, Section C, from Brookline Street to the end of the Charles River Embankment Company's sea wall west of the Harvard Bridge, Section D from River Street to Brookline Street, Section E, from Western Avenue to River Street, and Section F, from Richardson & Bacon's east to Western Avenue. It will be seen, therefore, that there is a large amount of uncompleted work to make such a continuous drive as has been planned, such as is demanded by all classes of citizens, and such as will be a credit to the City, and of priceless value from an æsthetic, moral and pecuniary standpoint.

It does not seem to the Board that the City can or should pause in the development of the river front at this stage. It is well known that such work as has been done has added largely to the pleasure, recreation and enjoyment of the people of this and other towns, has attracted visitors and would-be residents, has added largely to taxes by increased valuations, in other words, has paid, or is paying for itself. The total cost per year of park work per capita to date is 76 cents; on the tax rate the cost is represented by only 69 cents. It cannot, therefore, be claimed that the expenditure bears heavily upon our people. Further, the expenditure will lessen each year by increase in valuations, so that the cost will never be greater hereafter, and will grow gradually less.

With these considerations in mind, the Board feels that it is its duty to recommend that the City obtain authority to borrow sufficient money by issue of bonds to complete the river parkway, and that it should plan its work for the coming year upon the theory that its recommendations will be followed. Should the City decide to stop construction work, the Board feels that it would not be advisable to do any construction work on the new sections during the coming year, as the amount available would not suffice to complete

any one section, and that it would be better to use its available money in bringing other sections and places to a more complete state.

The second consideration presented to the Board, in case that it is determined to go on with the work, is as to the locality to be treated. In determining this question the probabilities concerning the matter of the proposed dam confront us. The site of the dam is from Ashby Street, or St. Mary's Street prolonged, in Boston, to a point on Cambridge shore about at Chestnut Street. Below that point a sea wall will be necessary in any event, running from the dam to the end of the present wall which is about 2,230 feet west of Harvard Bridge, a stretch of about 1,840 feet. Above the dam, while a short stretch of sea wall will be necessary in any event, the method of treatment of the rest of the river shore depends upon the question whether the dam is, or is not to be built. If it is to be built, but little sea wall will be necessary; if it is not to be built, more will be necessary, and where not used a different treatment of the river bank will be required than if the dam should be built. Whether or not the Federal Government will authorize the construction of the dam is not known. Under the Act of the Legislature of 1898, Chapter 531, the Metropolitan Park Commissioners were directed to build the dam, provided the consent of the Federal Government could be procured. As yet the Metropolitan Park Commissioners have taken no steps to obtain such consent.

But this uncertainty about the dam limits the Board in its work in the immediate future, lest otherwise its work might have to be undone or go for naught. The river work above Boylston Street, it is true, was undertaken under similar conditions, but it was felt that a start must be made on the river, to demonstrate to our citizens the character and nature of river park development, and as an inducement to work by the Metropolitan Park Commissioners on the Boston side. It is believed that the results have justified our course and that the wisdom of it is apparent. The beach work on that section is of a kind that will fit either condition of the river, but it would not be wise in the altered conditions down the river to repeat the experiment.

Our choice of location for future work, therefore, seems to be limited to those portions of the river where a sea wall will have to be built in any event, and the Board therefore believes and recommends that its future work should be in extension of the present Esplanade on both sides of Harvard Bridge. By this course, no work will need to be undone upon construction of the dam.

The foregoing considerations, however, do not entirely influence the Board. There are others which have considerable weight. At present there is a double driveway for a distance of 1,000 feet west of Harvard Bridge, with paths, planting spaces and shade trees, a reservation of 200 feet wide, which in the immediate future will, with its frontage on the river, form a very interesting and attractive spot. But this driveway leads nowhere. After one has driven up the 1,000 feet, there is nothing to do but to turn and drive back by the other parallel driveway; consequently there is nothing apart from the particular attractiveness of the short drive to draw people. The Commissioners believe that the Esplanade should be extended, if not as far as the dam, at least to a point sufficiently near Chestnut Street, to enable a driveway to be constructed to connect with Chestnut Street, so that a pleasant and attractive drive can be had from this part of Ward Four, by means of the Esplanade, to and across Harvard Bridge, and by the Fens and North Beacon Street to Cottage Farm, and across the river by Brookline Street to the point of beginning. In

addition to such connection, it would give to the residents of that part of Ward Four a far more attractive way of entering Boston than they now possess, and give all Cambridge people and visitors an opportunity to reach Harvard Square without the necessity of driving over the busy and crowded Massachusetts Avenue.

The natural continuance of this drive would be by extension of the drive from the dam to the recently constructed river drive at Brookline Street, and thence to the play-ground at Magazine Street.

It is evident without further argument that valuations of that part of Ward Four would increase, and an impetus be given to development of the lands lying between the Esplanade and the railroad. Such land will be rendered accessible, being now totally inaccessible, building will follow, and a quick increase in taxable values will result. At present there is in that section a vast area of unfilled, or partially filled land, of no value to either the owners or the City. The driveway will bring this land into notice and tend towards its early use and occupation.

For the foregoing reasons the Board proposes to extend its work to this section. It asks the aid of the abutting owners in the proper treatment and development thereof.

For like reasons the Board favors the extension of the Esplanade on the easterly side of Harvard Bridge along the sea wall and over the flats which have been filled during the past year, to meet the new West Boston Bridge. This will afford a driveway, when the Boston Park Commission has completed its work on the Boston side of the river, which will include both sides of the river from West Boston Bridge to Brookline Street Bridge or beyond.

The one advantage to be derived from these extensions is that a completed section results. The work does not end abruptly, but is continuous to a natural termination.

The extension of the Esplanade on both sides of Harvard Bridge is therefore recommended as the work for the coming year.

Suggestions As to the Proper Treatment and Development of Residential Land Adjacent to Park Areas.

One of the many problems presented to the Commissioners, and which has occasioned most serious consideration, has been to determine how best to accelerate the value of residential property adjacent to park areas.

The inevitable result of park work wherever carried on, has been to increase not alone the assessed, but the market values of adjacent properties. This result has been clearly set forth in our previous reports, and the facts in proof thereof do not need to be repeated here. The same result is shown, whether the adjacent property is suitable for business or for residential purposes. With the former we are not at present concerned. It is the latter condition which demands our attention.

It has been brought to the Commissioners' notice that in some sections of our park work the park areas are separated from the better class of residences by settlements of the cheapest character, which produce but little, comparatively speaking, in the way of taxation and values, and occupy an area which, if vacant, would be eagerly sought by those who would erect expensive dwellings and bring to the City a larger increase in taxes. Where such settlements are few or are scattered over a large area, it can safely be left to time to bring

about the desired change. But where the settlements are large and compact, and in the hands of many owners, it is doubtful if any change could be effected in a long time, if left to time alone.

In such cases it has seemed to the Board that the City could do nothing which would contribute more to its own advantage than to enter upon such property, obtaining from the legislature general authority so to do, if it has not such already, devote such part thereof to park purposes as seems advisable, and dispose of the remaining under proper restrictions and conditions so as to produce the best results. This plan has been tried elsewhere with success, and could be safely tried here.

Some Figures of Interest to Tax Payers.

From the beginning of park construction (1893) to December 1, 1898, the City has spent for land and construction purposes the sum of $972,670.82, or nearly one million dollars. None of this was raised by tax levy, but was obtained from the proceeds of sale of four per cent forty-year bonds. The interest and sinking fund charges upon the bonds for the current year amount to $48,945. Adding to this the cost of maintenance for the year, $12,999.33, which includes also care of trees and public grounds, makes a total expenditure for the year of $61,944.33 to be raised from taxation. In other words, it has cost the City during the past year for parks and park work, shade trees and public grounds, the sum of $61,944.33. Based upon the 1895 census (81,643), the cost per capita is 76 cents. Based upon our 1898 tax rate of $16.40 per $1,000, 69 cents represents the cost of the park work. Applying these figures in a practical way, a man who pays taxes on $100,000, or $1,640, finds that $69 thereof represents the cost to him of the park system; a man who pays taxes on $10,000, or $164, pays $6.90 for his share of the expense.

It is true that our tax rate might have been $15.71 this year, had it not been for the cost of our parks. But instead of Cambridge Field and Shelter we should have had an unsightly and barren waste; we should still be enjoying the muddy shores of the Charles River above Boylston Street, and the other conditions which are fresh in all minds; we should still have a large part of our water front on the Back Bay under water instead of an immense area filled to grade, and suitable for residential or industrial purposes.

The City of Boston, with a population seven times that of Cambridge, has a total area of 2,271 acres devoted to park purposes, as against an area in Cambridge of 162 acres, or nearly fourteen times as much. In proportion to population Boston has twice as much park area as Cambridge.

A comparison of the cost of certain parks in the two cities, which are similar in conditions of locations and use, may be interesting. Cambridge Field has an area of 12.6 acres and cost 37 cents per square foot; Charlesbank in Boston has an area of 10 acres and cost $1.56 per square foot, showing a decided advantage in favor of our City.

Charlestown Heights, having an area of 10 acres, 4 acres being upland and 6 acres flats, cost 34 cents per square foot, while that portion of our completed riverway from Boylston Street to Cambridge Hospital, an area of 14 acres, cost only 32 cents per square foot.

The property benefited by the construction of Cambridge Field has increased in value from $936,100 in 1893 to $1,661,600 in 1898, or $725,500, more than three and one-half times the cost of the Field.

The valuation of the property benefited by the Rindge Field work has increased from $77,900 in 1893 to $116,800 in 1898, or $38,900.

The valuation of the property benefited by the East Cambridge Embankment has increased from $655,100 in 1893 to $766,100 in 1898, or $111,000.

On the river parkway from Section C to Section G inclusive, there has been an increase from 1893 to 1898 of $487,700.

In other words, the total increase in values since 1893, all of which is attributable solely to park construction, is $1,363,100.

Related Matters.

It is not properly one of the functions of this Board to recommend the laying out of public streets, but there are two instances where such streets bear so close a relation to the park work that it seems not improper to bring them to the attention of the City Government. Eliot Street in Ward One should be extended to connect with Dyke Street and the river driveway, and can be done at this time at a small expense. This extension would make a short, direct and very necessary connection between the river drive and Brattle Square, and at the same time would open up quite a section of territory that could advantageously be used for building purposes.

Granite Street in Ward Four should be extended from Magazine Street to Brookline Street. This extension will be absolutely necessary for a proper, economical and attractive laying out of park lands in that section. It will also serve as an important connection between the two streets for the driving public who may pass over the Brookline Bridge.

North Harvard Street, Brighton, has been widened to conform to Boylston Street, Cambridge, in accordance with the agreement made by the Street Commissioners of Boston some time ago. The street has been regraded and entirely and thoroughly rebuilt and another attractive approach to Cambridge thus added. Soldiers Field and the new Metropolitan Park Speedway on the Longfellow meadows will bring this section into such extensive use that it will soon be necessary to widen and rebuild the Boylston Street Bridge.

Connection With Middlesex Fells and the Boston Park System.

It seems the proper time to call the attention of the citizens of Cambridge to the fact that nothing has been done by the Metropolitan Park Commission in aid of any park work in this City, with the exception of a small taking between Gerry's Landing and Mount Auburn Street and a donation to the fund to secure a portion of the Lowell estate as a memorial.

In 1894 Cambridge requested the Metropolitan Park Commissioners to construct a park drive between Fresh Pond and Middlesex Fells, which should be the connection via the Charles River Drive between the Fens and the Fells. This request was endorsed and petitioned for by the Mayor, the Water Commissioners and Park Commissioners of Boston, the Mayors of Somerville, Waltham, Newton, Everett and Cambridge, the Park Commissioners of Cambridge, Brookline, Belmont, Woburn and Winchester, the Board of Trade of Watertown and the Citizens' Committee of Arlington.

This request, so far as is known, was not heeded. Gifts of money and lands from the Town of Winchester and private owners secured the completion

of the parkway from Winchester to West Medford. There it stopped and nothing apparently has been done to extend it to the Charles River. Cambridge does not ask any assistance from the Metropolitan Park Commission for any local improvements, but it does ask that this connection be provided. It asks in its own interest and also in the interests of the towns lying south of the Charles.

The Charles River valley is in the heart of the Metropolitan District and is capable of being converted into a parkway, waterway and driveway sufficient for the recreative and æsthetic requirements of its future population. This river park will be the easiest of access to the greatest number and should be connected with the great reservations on the north as well as those on the south.

It is a fact that Cambridge is practically isolated from the want of proper connections with the park systems of other cities and towns in the district. It is possible, of course, to use existing streets and highways for the purpose, but such use has many objections. Recognizing this fact, the Legislature, by Act of 1894, Chapter 288, expressly imposed upon the Metropolitan Board the duty of making proper connections, and many such have been or are being made on the northern side of Boston. Up to the present time, however, Cambridge has received no attention, although in the judgment of your Commissioners its needs are evident. Cambridge will be called on to pay a larger proportion of the assessments for the Metropolitan work than any other city or town except Boston. Its citizens have spent more for local park construction, all of which will fit into the general Metropolitan work, than any other city or town in the district in proportion to population.

The Commissioners feel that Cambridge should urge the construction of a boulevard to connect our beautiful Fresh Pond Drive with Middlesex Fells, especially since the Metropolitan Board has projected a connection between West Medford and Arlington, which leaves only the short distance between Arlington and Fresh Pond to be cared for.

The Commissioners also believe that the bridge over the Charles connecting the speedway and riverdrive on the Longfellow marshes with Gerry's Landing, which has been contemplated by the Metropolitan Board, and the construction of the driveway from Gerry's Landing to Mount Auburn Street, should receive the early attention of the Metropolitan Board.

The erection of the Hospital buildings, the Home for Aged Couples, the projected construction of the College Infirmary on this driveway and the projected work of this Commission on the shores of the river at the Hospital seem to be sufficient to warrant this request.

When these connections are made Cambridge will no longer be isolated. It will then be possible for our citizens to reach the Boston park system on the south and the Middlesex Fells on the north, our own system forming the connecting link between the two.

Financial Statement.

During the year bills have been approved by the Board and certified to the Auditor to the total amount of $168,243.89. This amount is divided as follows:

Park lands and construction	$155,244 56
Park maintenance	12,999 33
	$168,243 89

These two amounts were expended as follows:

Park Loan.

Amount appropriated April 6, 1898		$142,827 74
Amount appropriated June 30, 1898		40,000 00
		$182,827 74

EXPENDED.

River Parkway, Section A.		
Construction account	$67,968 48	
Land account	1,512 48	
		69,480 96
River Parkway, Section B.		
Construction account	$32,645 90	32,645 90
River Parkway, Section C.		
Construction account	50 87	50 87
River Parkway, Section D.		
Construction account	13,467 21	
Land account	125 00	
		13,592 21
River Parkway, Section E.		
Construction account	$18 75	18 75
River Parkway, Section F.		
Construction account	5,773 51	
Land account	1,020 29	
		6,793 80
River Parkway, Section G.		
Construction account	$17,253 53	
Land account	30 00	
		17,283 53
Rindge Field.		
Construction account	$4,606 65	4,606 65
East Cambridge Embankment.		
Construction account	1,321 79	1,321 79
Hastings Square.		
Construction account	943 61	943 61
Cambridge Field.		
Construction account	769 94	769 94
Winthrop Square.		
Construction account	113 39	113 39
Nursery.		
Construction account	105 00	105 00
General Accounts.		
Construction account	5,648 02	5,648 02
Office Expenses.		
Construction account	1,870 14	1,870 14
Total amount expended		$155,244 56
Balance of appropriation unexpended		27,583 18

From the above it will be seen that the amount expended during the year under the Park Loans was divided as follows: —

Construction account	$152,556 79
Land account	2,687 77
Total	$155,244 56

Park Maintenance.

Amount appropriated April 6, 1898		$13,000 00
EXPENDED.		
Shade trees	$3,548 09	
Commons and squares	3,253 57	
Shelter	2,561 17	
Cambridge Field	2,228 22	
Nursery	755 45	
Public grounds	444 80	
General account	118 83	
Rindge Field	89 20	
Total amount expended		12,999 33
Balance of appropriation unexpended		67

A detailed classification of the expenditures will be found in the report of the General Superintendent.

Since the beginning of the work in 1893, there has been expended to date of money raised under the Park and Esplanade Loans, the sum of $972,670.82.

The division is as follows:—

River Parkway:—		
Section A.		
Construction account	$121,990 29	
Land account	1,576 83	
		$123,567 12
Section B.		
Construction account	$32,978 20	32,978 20
Section C.		
Construction account	$50 87	
Land account	1,413 55	
		1,464 42
Section D.		
Construction account	$17,233 30	
Land account	95,047 25	
		112,280 55
Section E.		
Construction account	$18 75	
Land account	25 00	
		43 75
Section F.		
Construction account	$21,283 59	
Land account	66,432 36	
		87,715 95
Section G.		
Construction account	$112.827 03	
Land account	80,681 08	
		193,508 11
Cambridge Field:—		
Construction account	$124,289 40	
Land account	78,884 85	
		203,174 25
East Cambridge Embankment:—		
Construction account	$86,247 30	
Land account	45,231 40	
		131,478 70
Amount carried forward		$886,211 05

Amount brought forward		$886,211 05
Rindge Field :—		
Construction account	$8,609 80	
Land account	31,461 85	
		40,071 65
Broadway Park :—		
Construction account	$11,308 65	11,308 65
Nursery :—		
Construction account	2,549 37	2,549 37
Winthrop Square :—		
Construction account	1,866 26	1,866 26
Hastings Square :—		
Construction account	943 61	943 61
Office expenses :—		
Construction account	8,096 26	8,096 26
General Account :—		
Construction account	26,118 36	26,118 36
		$977,165 21
Less Park revenue for 1894 and 1896 merged into land and construction accounts		4,494 39
		$972,670 82

Of the whole amount of Park Loans expended to December 1, 1898, 41 per cent has been for land and 59 per cent for construction, as follows :—

Land account (less "revenues")	$396,259 78
Construction account	576,411 04
	$972,670 82

During the year another change in the Board has been necessitated by the retirement on account of ill health of Rev. John O'Brien, who had served as a Commissioner since its first organization. Father O'Brien is one of the pioneers in Cambridge of park development, and his interest and zeal in the work have been constant. The Board received his resignation with great regret.

Respectfully submitted,

GEO. HOWLAND COX,
WILLIAM M. RICHARDSON,
EDMUND REARDON,
} *Park Commissioners.*

REPORT OF THE GENERAL SUPERINTENDENT OF PARKS

CAMBRIDGE, December 1, 1898.

To the Board of Park Commissioners of the City of Cambridge:—

GENTLEMEN:— I have the honor to present my second annual report as General Superintendent of Parks, covering the financial year 1898.

River Parkway.

For purposes of construction, the river parkway has been divided into sections, as follows:—

Section A. — From West Boston Bridge to land of Charles River Embankment Company.
Section B. — Fronting land of Charles River Embankment Company.
Section C. — From land of Charles River Embankment Company to Brookline Street.
Section D. — From Brookline Street to River Street.
Section E. — From River Street to Western Avenue.
Section F. — From Western Avenue to Boylston Street.
Section G. — From Boylston Street to Cambridge Hospital grounds.
Section H. — Along Cambridge Hospital grounds to Metropolitan Park Reservation.

River Parkway. Section A.

The work of building a sea wall and filling the flats at Section A has been carried on under the direction of the City Engineer. The sea wall has been completed at a total cost of $90,590.77, including cost of stone ballast. The filling of the flats will be completed about the first of February, 1899, and will have cost about $50,500.

River Parkway. Section B.

The work at this section was the first commenced and is the most important of the year. Early in March work was begun on the excavations for the tree spaces. These spaces were evacuated four feet deep over an area of about 100 square feet. Considerable water was met with which had to be removed by means of hand pumps. The grass and planting spaces were dug to a depth of eighteen inches. On the east side of Massachusetts Avenue the material excavated was very sandy and was sold for building purposes, about 3,000 cubic yards being removed in this way. The material on the west side of the

avenue was of a coarser quality and was used in building the streets and walks.

Early in April the trees were set out, one row on either side of each roadway. Two hundred and sixteen Acer Platanoides (Norway Maples) were planted. These are carefully selected trees and are the finest that could be obtained in this locality.

The work that consumed the most labor was the spreading of the loam over the grass and planting spaces. The total amount of loam used at this section was 18,810 cubic yards.

A complete watering system has been established for Section B. A main line of six-inch pipe was run from Massachusetts Avenue on either side in the center in the inner sidewalk. From these main lines 12 one-inch lines were run, feeding 38 hydrants. The watering system, including labor, cost $518.32.

Catch basins have been built on either side of each roadway 200 feet apart. The basins on the outer row near the river were built in a very substantial manner. Holes were dug to a depth of about ten feet, six to eight feet in diameter. At the bottom of these holes platforms or "floats" were built of stout planks on which the basins were constructed of brick and cement. These catch basins receive their water from the three other rows of basins and empty into the river. The other catch basins are very simple in construction, being built of ordinary sewer pipe bedded into brick so as to hold the catch-basin cover. The drainage system cost $825.54, exclusive of part of the labor.

Massachusetts Avenue at Section B has been widened twenty feet and resurfaced with a macadam finish. The old curbing has been removed and new pean-hammered stone set, making the openings into the park roadways.

The loam spaces have been treated with fertilizer and seeded.

River Parkway. Section D.

In July, 1898, a contract was made with the Bay State Dredging Company to furnish and spread to grade, for 61 cents per cubic yard, about 12,000 cubic yards of gravel to be dredged from the river. This gravel was used in building a roadway 40 feet wide across the marsh from Brookline Street to Magazine Street and in widening Magazine Street to Granite Street. Owing to the settlement of the marsh under this filling, it was found necessary to contract for an additional 5,000 cubic yards of gravel which was obtained at the same price. This river gravel is excellent material for road building and costs about one-half as much as bank gravel.

A playfield of 86,400 square feet, or nearly two acres, has been graded, using the gravel and sand which was in piles at the foot of Magazine Street. The grade of this field was so low that the highest tides flowed over it, so it was decided to build a dyke along the shore line from Magazine Street to the new park road near Brookline Street, a distance of about 1,340 feet. In November, 1898, a contract was made with Nawn & Brock to build this dyke for $1.47 per lineal foot. The dyke is being built of marsh mud thoroughly rammed and compacted, covered with marsh sods. On top of the dyke there is to be a gravel walk four feet wide. Inside of the dyke and parallel to it a ditch has been dug to act as the main drain. At right angles to this ditch trenches have been dug, so as to thoroughly drain the entire marsh enclosed within the dyke. The main drain empties into the Pearl Street sewer, gates being employed to prevent the tides from backing up into the drains.

It was found necessary to repair the Pearl Street sewer and where it passes under the new park road piles were driven to carry the extra weight. This cost was divided equally between the Sewer Department and this Department.

River Parkway. Section F.

The contract made in 1897 with the Bay State Dredging Company for furnishing and spreading 20,000 cubic yards of river gravel was completed early in the spring, forming the walks, roadway and beach from Boylston Street to Richardson & Bacon's coal wharf. The loam spaces or planting strips, one on either side of the roadway, were then dug. Owing to the porosity of the filling, and acting upon the advice of the landscape architects, a layer of clay eight to ten inches in thickness was spread on the bottom of these trenches to retain the moisture. This clay was dredged from the river and cost 35 cents per cubic yard delivered. A coating of lime was spread on the clay in order to neutralize any acid. Loam to a depth of one foot was used in these trenches, except at the tree spaces, where two feet was used. Trees of the Platanus Orientalis species (plane trees) were planted on either side of the roadway in the planting strips and the strips sodded.

The old edgestone crossing the parkway on the east side of Boylston Street has been removed and a connection made between Boylston Street and the parkway.

A vast improvement has been made between the Weld Boat House and Boylston Street. The old wooden fence has been removed, the space back of the bulkhead filled in and the whole regraded to conform to the grade on Boylston Street. The ground around the boat house has been reconstructed with walks and planting spaces, and drainage and watering systems established.

An iron fence has been erected along the top of the old bulkhead and from the bulkhead to the bridge on Boylston Street. Welsbach lights have been put in.

The park roadway and walks have been surfaced with a fine quality of bank gravel, which should be rolled with a ten or twelve ton roller next spring.

River Parkway. Section G.

The work of most importance at Section G, this year, was the raising to grade of the roadway, walk and planting strips between Murray Street and the old gas house wharf. These had settled from one to twelve inches. This work necessitated also the raising of the upper portion of the beach. In the early spring the planting of the plane trees on either side of the roadway was continued from Murray Street to the gas wharf, and later the planting strips were sodded with sods received from Rindge Field. In other portions of Section G, where settlement had occurred, the surface was raised only enough to allow of drainage. In several instances the catch basins were lowered to save considerable regrading.

About 2,145 cubic yards of mud, which had been displaced by settlement of the filling, have been dredged from the foot of the beach.

Edgestone has been set on the east side of the roadway from Mount Auburn Street to the foot of Bath Street, connection being made between Mount Auburn Street and the park roadway, where a concrete crossing was put in.

A brick sidewalk has been built along Mount Auburn Street from Bath Street to the Cambridge Hospital grounds, costing $1,902.33.

The park roadway at the foot of Bath Street has been changed, carrying the road in from the river, thus making a less abrupt turn and better approach to Mount Auburn Street.

The roadway from Boylston Street to Mount Auburn Street has been thoroughly rolled with a twelve-ton roller and a smooth, hard surface obtained.

A lighting system has been established at Section G, using the Welsbach naphtha generating lamps. Thirty-three of these lamps have been in use since July and have cost about $2.70 per lamp per month.

Shrubbery has been planted at the foot of Bath Street and inside the iron fence on Mount Auburn Street.

This section has been carefully policed during the year, resulting in the arrest and conviction of fourteen persons who had violated City and Park Ordinances.

River Parkway. Section H.

Surveys and plans have been made of the proposed taking along the Cambridge Hospital grounds from Section G to the Metropolitan Park Reservation.

No construction work has been done on Sections C and E of the river parkway this year.

Rindge Field.

The plans of the landscape architects for the reconstruction of Rindge Field contemplate work very similar to that already completed at Cambridge Field. That portion of the field adjacent to Rindge Avenue is to be utilized for lawns, planting spaces and walks, leading up to an open shelter and music court. An open-air gymnasium is designated at either side of this court. The rest of the field is given up to a large play-ground for small games, and so constructed that it may be flooded for skating. The plans indicate the removal of the Wyman School, but do not include any territory south of Railroad Street.

The work this year consisted in building streets on the east, west and south sides of the field connecting with Rindge Avenue at either side of the field. In July, 1898, a contract was made with P. T. Leahy to furnish about 1,700 cubic yards of gravel at 65 cents per cubic yard. 1,089 double loads of material were received from the Street Department at 30 cents per load. The streets were first stripped of sods and loam, which were used in other park work as follows: 2,424 cubic yards of loam and 15,330 feet of sod at Section B, 45 cubic yards of loam and 22,509 feet of sod at Section G, 18 cubic yards of loam and 3,066 feet of sod at Section F, and 825 feet of sod at Hastings Square. Sub-filling was moved from one portion of the street to another so as to allow for from nine to twelve inches of gravel. The streets have not been rolled.

Two catch basins have been built on Railroad Street and connected with the Railroad Street sewer.

The next work done at Rindge Field should be the construction of a base-ball field, in its final location. The present field is in very poor condition.

Watering and drainage systems should be established.

East Cambridge Embankment.

The work at East Cambridge Embankment was carried on until the end of February. The work consisted chiefly in ballasting the sea wall on the inside with broken bricks and stone. No filling has been purchased this year, and only 318 double loads have been received free. That portion of Binney Street between First Street and Commercial Avenue has been excavated to grade and a substantial roadbed made of broken stone.

Cambridge Field.

Cambridge Field has very clearly demonstrated its great usefulness this first year since its completion. During the months of spring, summer and autumn the average daily attendance on pleasant days was between two and three thousand persons. These visitors enjoyed themselves in various ways: the younger ones in the sand courts and on the see-saws, the older ones on the large playfield engaged in hockey, base-ball, foot-ball, etc., while many others strolled about enjoying the cool breezes and delightful scenes.

Last winter the playfield was flooded and skating was enjoyed by vast crowds for a short while, but the January storm put an end to this sport.

On account of the porous condition of the playfield, it being entirely filled ground, the surface is in a very poor condition for base-ball or foot-ball. The rains wash the finer binding material into the ground, leaving many stones exposed. A fine binding gravel should be spread over the entire playfield to a depth of four or five inches and thoroughly rolled with a ten or twelve ton roller. This would give a surface which should stand the wear for a number of years. Surfacing the field in this manner would cost about $7,000.

The grass and shrubbery are in fine condition, but have necessitated the constant care of four men from April to November.

The field has been under the direct care of a Superintendent. A matron and a janitor have been constantly employed at The Shelter, while the field has been policed during the afternoon and evening hours. Twenty-four arrests have been made, from which twenty-four convictions were obtained in the municipal court.

Shade Trees.

Most of the year's work on the street trees has been confined to completing orders received at the office for trimming, repairing guards and removing broken and dead limbs. During the year thirty-nine petitions for the removal of trees have been received, thirty of which have been granted. Numerous trees partly dead and in an unsafe condition have been removed without petition. The trees removed from the streets were as follows:—

Acer platanoides (Norway maple)	1
Acer rubrum (swamp maple)	4
Acer saccharinum (rock maple)	15
Aesculus hippocastanum (horse chestnut)	7
Ailanthus glandulosa (tree of Heaven)	1
Fraxinus Americana (white ash)	6
Populus canadensis (cottonwood)	1
Tilia Americana (American linden)	2
Ulmus Americana (American elm)	28
Ulmus campestris (English elm)	2
	67

It is the intention to employ a "tree inspector" next year, whose duty it shall be to carefully inspect all the public trees in the City, making a report as to the condition of the trees and wire guards, what trimming is needed, where trees are too crowded, or where trees should be planted. In this way it is hoped that any work done on the trees may be systematic, tending to the best results for the whole City rather than for individual cases.

Very little street planting has been accomplished this year. About 220 holes were prepared for trees early in the fall, but the heavy snow in November caused a postponement of the work until next spring.

The trees planted on the streets were as follows:—

Acer saccharinum (rock maple)	16
Ulmus Americana (American elm) . . .	9
	25

In March, 1898, a communication was received from the State Board of Agriculture, calling the attention of the Commissioners to the existence of the Brown-tail Moth in Cambridge, and to the Acts of Legislature relative thereto. Circulars were immediately issued by the Commissioners to every property owner in Cambridge, which resulted in locating the moth in large numbers in North Cambridge and Old Cambridge.

About thirty men, who had been employed by the Gipsy Moth Commission, were secured and set to work destroying the nests in the most badly infested districts. This work was continued for about five days, during which time 811 street trees were climbed on which 3,386 nests were destroyed, at a total cost of $397.94.

Commons and Squares.

Hastings Square has been reconstructed in accordance with plans prepared by the landscape architects, the work costing $943.61, or three cents per square foot. The old walks were removed and new ones built in different locations, old entrances abandoned and new ones constructed in more useful positions. Numerous trees and shrubs were removed in order to give room to those remaining. The old turf was spaded, regraded and seeded. Drainage and watering systems have been established.

The iron fence surrounding Fort Washington Square necessitated repairing which cost $8.25.

Late in the year work was commenced making three new board walks for Cambridge Common. This work cost about $250.00. Additional new walks should be made next year.

The commons and squares have required the constant care of ten men from April to November, attending to the grass, shrubbery, etc.

Public Grounds.

Owing to lack of funds, it was found impossible to go on this year with the work of remodeling the Public Library grounds, which was commenced in 1897. About one third of the work contemplated by the plans of the landscape architects was completed that year and the rest of the work should be finished next year before the shrubbery already planted is too far advanced.

The grounds around the new English High School, at the corner of Broadway and Trowbridge Street, have been greatly improved by the planting of shrubbery. A watering system has been put in.

Plans should be made this winter for the construction of the new Latin School grounds on Trowbridge Street. The building is so nearly completed that the construction of the grounds should be undertaken next spring.

The grounds at the Taylor School, on Charles Street, have been constructed this year, the work having been done by this Department and paid for by the Public Building Department. Gravel walks, grass and planting spaces were put in and a neat iron picket fence erected on Lowland Avenue, Charles and Vine Streets.

An examination has been made of all the school yards in the City and those which do not urgently need to be improved are greatly in the minority. A great many of the yards are enclosed with high board fences which are very unsightly. These should be removed and replaced, if necessary, by iron picket fences. Many of the yards could be made almost beautiful, in comparison with their present condition, at a moderate outlay. Take, for instance, the Agassiz School yard, at the corner of Oxford and Sacramento Streets. The building is in a fine condition while the yard is disgraceful, although hidden from the street by a high board fence. This corner could be made one of the most attractive spots in Cambridge at the cost of less than a thousand dollars.

Following is a list of school yards, showing briefly their condition and the probable cost of needed improvement.

School.	Location.	Yard Area in Sq. Ft.	Condition of Yard.	Needed Improvement.	P
Agassiz	Sacramento St	15,337		Graded. Remove fence	$850 00
Allston	Boardman St.	14,405	Fair	Planting. Lawn	350 00
Boardman	Winsor St	5,528	Fair	Lawn. Remove fence	120 00
Corlett	Holworthy St.	8,800	Poor	Lawn. Fence	340 00
Cushing	Cushing St	12,897	Poor	Lawn. Walks. Planting	290 00
Dana	Centre St	12,347	Fair	Lawn. Walks. Planting	300 00
Dunster	Concord Ave.	8,150	Fair	Front changed	210 00
Felton	Amory St	11,760	Very poor	Graded. Remove fence	940 00
Gannett	Jefferson St	12,209	Good	Resodded	50 00
Gore	Gore St	5,364	Good	No change	—
Harvard	Inman St	12,030	Good	No change	—
High	Broadway	68,094	Excellent	No change	—
Holmes	Hilliard St	8,894	Poor	No change, school not in use	—
Lassell	Charles St	6,992	Poor	Graded. Planting. Lawn	310 00
Latin	Fayette St	32,188	Poor	Graded. Lawn. Remove fence	910 00
Latin (new)	Trowbridge St	—	Not finished	- -	—
Lee Street	Lee St	5,380	Fair	No change, school in too poor condition	—
Lowell	Lowell St	9,108	Very poor	Graded. Lawn	340 00
Morse	Allston St	15,420	Excellent	- -	—
Otis	Otis St	5,190	Poor	Planting. Lawn. Fence	310 00
Parker	Broadway	8,024	Very poor	Graded. Planting	490 00
Peabody	Linnæan St	17,663	Fair	Resodded. Planting	70 00
Putnam	Fourth St	10,575	Good	Planting	30 00
Quincy	Mason St	6,383	Poor	Lawn. Planting	290 00
Reed	Reed St	9,915	Very poor	No change, school in too poor condition	—
Riverside	Putnam Ave	7,803	Very poor	Lawn. Fence	350 00
Russell	Larch St	25,728	Poor	Lawn. Walks. Planting	300 00
Sargent	Broadway	7,899	Fair	Lawn. Walks. Planting	320 00
Shepard	Mass. Ave	9,640	Fair	Lawn. Walks. Planting	300 00
Sleeper	Dudley St	15,412	Excellent	No change	—
Stearns	Harvard St	7,530	Poor	No change, school in too poor condition	—
Tarbell	Grigg St	16,705	Very poor	Graded. Iron fence	990 00
Taylor	Charles St	17,058	Excellent	No change	—
Thorndike	Thorndike St.	2,637	Fair	Planting	100 00
Washington	Brattle St	10,121	Fair	Planting	340 00
Webster	Upton St	21,339	Good	No change	—
Willard	Niagara St	15,543	Fair	Lawn. Iron fence	900 00
Wyman	Rindge Ave	12,001	—	No change, school to be abandoned	—
Wellington	Columbia St	26,011	Fair	Lawn. Iron fence	360 00
Ellis	Norris St	—	Not finished	- -	—
					$10,070 00

The Year's Expenditures.

The expenses of the Department for the year are shown in the following summary of the departmental accounts: —

Park Loans.

Amount appropriated April 6, 1898	$142,827 74
Amount appropriated June 30, 1898	40,000 00
	$182,827 74

EXPENDED.

River Parkway. Section A: —			
Filling flats	$29,724 61		
Sea wall	27,116 76		
Ballast	10,590 76		
Lands	1,300 00		
Engineering	433 30		
Counsel fees	212 48		
Pay-roll	71 50		
Levelling ballast	20 30		
Water rent	6 38		
Advertising	2 00		
Recording license	1 87		
Repairing oars	1 00		
		$69,480 96	
River Parkway. Section B: —			
Loam	$13,235 40		
Pay-roll	11,608 46		
Teaming	3,925 07		
Drainage system	825 54		
Engineering	744 34		
Broken stone	724 16		
Watering system	518 32		
Trees	468 75		
Edgestone	290 57		
Grass seed	132 20		
Tools and hardware	53 62		
Stakes for engineers	41 48		
Sod	28 20		
Carpentering	15 93		
Blacksmithing	11 86		
Demurrage	10 00		
Tree poles	5 00		
Stationery and printing	4 00		
Coal	3 00		
		32,645 90	
River Parkway. Section C: —			
Engineering	$50 87	50 87	
River Parkway. Section D: —			
Gravel	$10,257 15		
Pay-roll	2,016 92		
Engineering	781 14		
Drainage system	237 12		
Teaming	129 83		
Counsel fees	125 00		
Stakes for engineers	17 50		
Lumber	12 18		
Consulting engineer	10 00		
Amounts carried forward	$13,586 84	$102,177 73	$182,827 74

Amounts brought forward	$13,586 84	$102,177 73	$182,827 74
Advertising	3 61		
Tools and hardware	1 76		
		13,592 21	
River Parkway. Section E:—			
Engineering	$16 75		
Pay-roll	2 00		
		18 75	
River Parkway. Section F:—			
Pay-roll	$1,530 96		
Moving and repairing Weld Boat House	1,283 00		
Loam	1,046 72		
Lands	1,020 29		
Gravel	893 59		
Engineering	257 13		
Iron fences	154 15		
Plans of Weld Boat House	125 00		
Repairing bulkhead	113 49		
Clay	80 85		
Edgestone	80 54		
Lime	75 60		
Teaming	50 25		
Watering system	31 83		
Lighting	25 87		
Drainage system	11 00		
Water rent	6 00		
Cutting edgestone	3 00		
Printing and advertising	2 16		
Recording license	1 77		
Oil	45		
Hardware	15		
		6,793 80	
River Parkway. Section G:—			
Pay-roll	$7,345 63		
Brick sidewalk	1,902 33		
Gravel	1,853 10		
Engineering	1,294 98		
Loam	1,065 18		
Iron fence	931 65		
Dredging mud	908 85		
Lighting	418 04		
Teaming	312 17		
Edgestone	293 54		
Paving stone	227 61		
Filling	153 89		
Steam roller	120 00		
Trees	92 85		
Concrete crossing	54 60		
Drainage system	53 21		
Sod	36 72		
Manure	33 73		
Appraising real estate	30 00		
Signs and posts	27 10		
Carpentering	23 15		
Rubbish barrels	21 75		
Tree poles	17 00		
Advertising	11 81		
Stationery and printing	10 57		
Tools and hardware	8 69		
Watering system	8 69		
Amounts carried forward	$17,256 84	$122,582 49	$182,827 74

Amounts brought forward	$17,256 84	$122,582 49	$182,827 74
Cutting edgestone	8 00		
Photographic material	6 00		
Serving notices	4 74		
Sharpening picks	3 45		
Sand	1 80		
Oil	1 40		
Lumber	1 30		
		17,283 53	
Cambridge Field: —			
Pay-roll	$710 26		
Broken stone	32 63		
Repairing tent	20 30		
Teaming	6 75		
		769 94	
East Cambridge Embankment: —			
Pay-roll	$670 29		
Teaming	261 50		
Broken stone	207 60		
Filling	161 50		
Engineering	8 25		
Fuel	6 00		
Blacksmithing	2 80		
Stove pipe	2 35		
Tools and hardware	1 50		
		1,321 79	
Rindge Field: —			
Pay-roll	$2,042 03		
Gravel	1,223 63		
Teaming	681 16		
Filling	326 70		
Engineering	260 12		
Drainage system	51 60		
Stakes for Engineers	17 50		
Printing and advertising	3 91		
		4,606 65	
Hastings Square: —			
Pay-roll	$663 13		
Gravel	127 04		
Drainage system	52 62		
Engineering	41 47		
Wooden posts	24 00		
Teaming	18 00		
Watering system	17 35		
		943 61	
General Account: —			
General Superintendent's salary	$1,196 64		
Landscape architect's fees	854 04		
Board of horses, carriage hire, etc.	650 96		
Pay-roll	450 39		
Car tickets for engineers	275 00		
Loam	209 26		
Printing and binding reports of 1897	186 93		
Horse	175 00		
Counsel fees	175 00		
Plants and bulbs	144 30		
Photographs and photographic material	123 86		
Rent of store room	120 00		
Bicycle and bicycle repairs	105 25		
Carriage and carriage repairs	105 05		
Amounts brought forward	$4,771 68	$147,508 01	$182,827 74

Amounts brought forward	$4,771 68	$147,508 01	$182,827 74
Heliotype cuts for reports of 1897	105 00		
Car tickets for office	100 00		
Inspection by City Council	91 50		
Plans of land takings	91 00		
Tools and hardware	72 74		
Teaming	69 00		
Stakes for engineers	60 15		
Garden hose	55 25		
Engineering	46 87		
Miscellaneous supplies for engineers	45 92		
Watering-cart	32 00		
Rubber goods	25 20		
Gravel	21 00		
Shoeing horse	20 00		
Printing and advertising	17 50		
Sharpening tools	6 45		
Repairing boat	4 63		
Blacksmithing	4 55		
Lumber	3 43		
Repairing harness	2 75		
Express	1 40		
		5,648 02	
Office Expenses: —			
Salary of book-keeper	$782 50		
Salary of stenographer	626 00		
Stationery and printing	227 96		
Telephone service	182 43		
Covering chairs	26 50		
Map	12 00		
Car fares	7 00		
Typewriter supplies	5 00		
Express	75		
		1,870 14	
Winthrop Square: —			
Pay-roll	$113 39	113 39	
Nursery: —			
Pay-roll	$105 00		
		105 00	
Total			155,244 56
Balance unexpended			$27,583 18

Park Maintenance.

Amount appropriated April 6, 1898 . . . . . $13,000 00

EXPENDED.

Shade Trees: —		
Pay-roll	$2,981 08	
Wire netting	283 73	
Tools and hardware	77 22	
Teaming	58 00	
Loam	42 28	
Trees	38 23	
Spruce poles	27 50	
Measuring pole	15 00	
Printing and advertising	12 10	
Amounts carried forward	$3,535 14	$13,000 00

Amounts brought forward	$3,535 14		$13,000 00
Sharpening saws	6 30		
Engineering	3 88		
Hose	2 77		
		3,548 09	
Commons and Squares:—			
Pay-roll	$2,919 69		
Teaming	119 64		
Hose	65 00		
Work on flag-staffs	49 36		
Tools and hardware	41 92		
Engineering	26 74		
Repairing flags	13 50		
Repairing fence at Fort Washington Square	8 25		
Goal posts	4 57		
Lumber	4 10		
Blacksmithing	50		
Express	30		
		3,253 57	
The Shelter:—			
Pay-roll	$2,061 92		
Lighting	202 97		
Telephone service	130 60		
Plumbing and supplies	48 82		
Toilet paper and holders	39 75		
Laundry	25 17		
Tools and hardware	22 88		
Glass for door	10 75		
Soap	9 20		
Repairing lights	2 38		
Carpentering	2 00		
Sponges	1 50		
Cheese-cloth	1 13		
Repairing iron fence	1 10		
Sawdust	1 00		
		2,561 17	
Cambridge Field:—			
Pay-roll	$2,066 77		
Teaming	70 61		
Sand	26 25		
Tools and hardware	25 24		
Work on flag-staff	15 75		
Flooding field	9 50		
Faucets	7 50		
Blacksmithing	2 25		
Repairing flag	2 00		
Catch-basin grating	1 35		
Repairing drinking fountain	1 00		
		2,228 22	
Nursery:—			
Pay-roll	$540 00		
Spruce poles	167 79		
Manure	38 09		
Rope	8 92		
Express	65		
		755 45	
Public Grounds:—			
Pay-roll	$222 32		
Loam	68 90		
Amounts carried forward	$291 22	$12,346 50	$13,000 00

Amounts brought forward	$291 22	$12,346 50	$13,000 00
Brick paving	50 11		
Watering system	43 64		
Teaming	33 75		
Engineering	23 68		
Manure	2 00		
Tools	40		
		444 80	
General Account:—			
Shoeing horse	$37 00		
Board of horse	29 17		
Stationery and printing	13 50		
Repairing bicycle	13 00		
Repairing wagon	10 50		
Repairing harness	8 60		
Blanket for horse	6 25		
Tools and hardware	81		
		118 83	
Rindge Field:—			
Pay-roll	$89 20	89 20	
Total			12,999 33
Balance unexpended			$ 67

Respectfully submitted,

H. E. WHITING,

General Superintendent of Parks.

REPORT OF THE LANDSCAPE ARCHITECTS

BROOKLINE, MASS., December 19, 1898.

Mr. George Howland Cox, President of the Board of Park Commissioners, Cambridge, Mass.:—

DEAR SIR:—We beg to submit the following report upon the matters which have engaged our attention in connection with the Cambridge parks during the year.

We have continued to have a general oversight of the improvements executed by your General Superintendent during the past year and have conferred with members of the Board and with the Superintendent from time to time as occasion arose. In addition, we have written forty-three letters on the business of the Board and have prepared sixty-one plans, including studies, preliminary and general plans and working drawings for grading and planting. Among the designs for new improvements, the following are worthy of some description in this connection: —

The Esplanade.

Sufficient time having elapsed since the filling behind the sea wall for about 1,000 feet east and the same west of Harvard Bridge to allow for most of the settlement that is likely to occur, the Board began the work of preparing the surface for planting. Early in the year we prepared drawings illustrating what seemed to us a reasonable succession of degrees of elaboration in the gardening works to be undertaken on the Esplanade. The plan is, for a few years, or until there is a reasonably large number of people using the Esplanade, to have the roads and walks built with gravel only, and to have the planting strips and central lawn covered with turf and planted only with trees in regular rows.

The second degree would be, after houses have been built in considerable numbers facing the Esplanade or near it, thus increasing the basis of taxation sufficiently to warrant the added expense of policing and gardening maintenance to curb and macadamize or asphalt the roadways, and to have in the central lawns some beds of ornamental flowering shrubbery symmetrically disposed and with formal outlines, and some symmetrical walks while the grass strips and central lawn would need to be kept in the most perfect condition possible.

The third degree of elaboration would come about gradually many years hence through the addition of handsome architectural embellishments, such as statues, sculptured fountains, etc., presumably largely through gifts of individuals, societies, and through popular subscriptions. At the same time, a

limited amount of nice floral decorations might be introduced in the central lawns, where the trees would not interfere with them unduly.

The sub-divisions adopted for the Esplanade are as follows: Next the sea wall, a promenade 20 feet wide; then a turf strip 7.5 feet wide, with a row of trees; then a macadam driveway 40 feet wide; then a lawn 80 feet wide, with a row of trees down each side, and open in the middle; then a driveway 30 feet wide (preferably asphalted) for access to adjoining properties; then a turf strip 7.5 feet wide, with a fourth row of trees, and finally a sidewalk 15 feet wide.

Charles River Drive.

The completion of this most important of all the works in charge of your Board can only be looked forward to for some years to come. The portion from the Esplanade to Brookline Street can be filled to the usual grade, but the surfacing would better be postponed until the proper lines and grades for the approaches to the proposed Charlesmouth Bridge and the probable dam shall have been determined, and the question of the separation of the street grades from the tracks of the belt line freight railroad shall have been further discussed and a comprehensive policy adopted.

From Brookline Street to Magazine Street the lines and grades of the Charles River Drive are shown on our grading plan, submitted in May of this year. The crown of the driveway is kept uniformly at elevation 21, the same as at Boylston Street. From Magazine Street to Richardson & Bacon's coal wharf the lines and grades have never been determined in detail, because of the uncertainty as to whether our plan for passing through the river frontage of the celebrated Riverside Press would be carried out.

From Richardson & Bacon's coal wharf to Bath Street, the Charles River Drive is nearing completion in accordance with our grading plans. From Bath Street the drive is at present omitted. It is designed to be extended eventually to Gerry's Landing, where it will connect with drives proposed to be built by the Metropolitan Park Commission. Bath Street has been remodeled and now connects Charles River Drive conveniently and gracefully with Mount Auburn Street and other streets, and with the Longfellow Memorial Park.

We have recently prepared a plan for the treatment of the river bank intervening between the completed work at Mount Auburn Street and the holding of the Metropolitan Park Commission beyond the Cambridge Hospital. This plan provides for a temporary, inexpensive treatment of the banks with a promenade and with a gravel beach like that at Mount Auburn Street, but so arranged that all the temporary work will be utilized whenever the construction of the proposed bridge and drives of the Metropolitan Park Commission leading from the Speedway toward Mount Auburn Street shall make a demand for the completion of the Charles River Drive to connect with them. The plan provides for filling out into the river (when this occurs) sufficiently to secure the same width of driveway and promenade as has been adopted elsewhere, but in order to do so an alteration of the pier and bulkhead lines will be needed, the channel remaining of the same width as now, but being shifted southward.

When the Charles River Drive and the similar work in charge of the Metropolitan Park Commission on the Boston side of the river shall have been completed, Cambridge will be unique among American cities, so far as we know, in possessing a handsomely improved parkway frontage five miles long on

what will by that time be a beautiful river, and amounting to over one-third of the entire boundary of the City. Considering how much the frontages and the vicinity of parkways in all our principal cities are sought after as sites for residences, it can hardly be doubted that investors will find it to their interest to hold the vacant lands bordering on the Charles River until the proposed parkways and shore improvements have been substantially completed and their benefits generally realized, and the time becomes ripe for a good class of residences to be erected along the parkway. Thus the vast expenditures needed to redeem the river and fit it for use and enjoyment will not only yield a handsome profit to investors, but the wisdom of investors in not forcing sales at present to persons wishing cheap lands for factories, mechanics' houses and wooden apartment houses will result, it is to be hoped, in a handsome class of buildings which will be attractive to all classes of citizens, who will in time use the river and parkways and pleasure grounds along its banks in far greater numbers than have as yet frequented the already completed parkways in Boston extending along the Fens, Muddy River, Leverett Pond, Jamaica Pond and to Franklin Park.

Captain's Island Playground.

In May we submitted a grading plan for the economical improvement of the small bit of hard land and the adjoining salt marshes. To save the cost and delay of filling over the salt marsh about five feet deep, as would be desirable for the sake of good appearance, if not for proper drainage if the tides are not to be kept out of Charles River by a dam, we provided in our plan for a temporary dyke about three feet high along the river bank, the drive being here separated from the river by the whole width of the playground. The ordinary tides having been thus excluded (though in an ugly way), it will be a comparatively inexpensive matter to drain the marshes by a system of small underground tile drains and suitable basins and tide gates. The whole can easily be flooded for skating in winter. All that remains to be done will then be to spread a few inches of hard, loamy soil over the mucky salt marsh and to seed it down to grass. A large field suitable for ball games having been secured, it is not thought that more elaborate provisions for amusements need be made for many years.

Hastings Square.

This small square had been planted years ago and had since had many additional trees and shrubs dotted over all remaining open space until the turf had become shaded out, the trees more or less spoiled by crowding and the effect miscellaneous and fussy. Early in the year we made a careful examination of the existing trees and shrubs and submitted a simple plan for concentrating the shrubbery into bold masses, adding smaller-growing sorts where needed, and for eliminating superfluous trees, opening up portions of the ground to the sky sufficiently to permit growing good turf and so as to obtain at the same time an agreeable contrast of plain turf against the rich shrubberies and the taller trees. All the trees which we proposed to remove have not been cut, as it was thought best to proceed cautiously in this matter, so painful to many good-hearted neighbors.

Rindge Field.

Last spring we submitted a general plan, and later a grading plan, for this gently sloping field surrounded by houses and factories. Permit us to quote from our letter of transmissal:

"The plan is drawn upon the assumption that the school occupying the lot at the corner of Groveland Street and Rindge Avenue will ultimately be moved to some other situation, as we have understood will probably be the case.

"The design provides, as at Cambridge Field, for a front lawn surrounded by trees and shrubbery, to be used after the manner of any small ornamental public ground, where people may sit or stroll in enjoyment of the trees and bushes and a gently modeled greensward. Immediately south of this lawn a formal grove is proposed, the surface of which would be gravel, where children can run freely about in the shade of the trees, playing games of tag, 'every-man-at-his-own-base,' and others, for which such an open grove is better adapted than any open field without obstructions, while the shade of the trees will be very grateful in the hot weather of summer. This grove is marked on our plan 'The Music Court,' and it is our expectation that band concerts would be held here occasionally, to the great enjoyment of the neighborhood. The circular affair marked 'Shelter' in the middle of the Music Court is intended to be a raised platform covered by a low conical roof, but open at the sides. At the time of concerts, this Shelter would serve as the band stand, while at other times it would give protection against sudden showers, and could include in its basement the toilet accommodations for the boys and girls who use the playground. On the other side of the Music Court, space is provided on the plan for the more active games, such as require special apparatus, or such as ought to be confined to limited areas for one reason or another. Of course, the amount of apparatus for such games to be supplied by the City is a matter which will be determined from time to time. The apparatus indicated upon the plan is intended merely as an indication of the sort of uses to which these restricted areas could be put.

"For the southern half of the field we propose a treatment of the gravel playground divided by rows of trees into a large central area and two lesser areas at the sides. As such neighborhood playgrounds as Rindge Field are not intended for use as places for large games, it is not absolutely necessary to keep so large an area of gravel as the southern half of Rindge Field entirely free from interruption, and we feel that the rows of trees suggested will rather form interesting adjuncts to the games than interfere with them in any way. The westerly row needs only to be completed by the planting of four new trees, the others being already in existence, and determining, to a large extent, the arrangement of our plan. The existing trees are indicated by a black dot at the centre. We propose such an arrangement of grades that this southern half of the field can be conveniently flooded for skating in the winter, leaving the trees in small circular planting spaces, slightly raised above the level of the ground so as not to be injured by this winter use."

English High School.

We designed some planting about this large and important school building, intended both to give the grounds an agreeably furnished, if not decorated appearance, and likewise to bring them somewhat into harmony with the

grounds of the Public Library, previously planted in a similar manner. Thus the general public, as well as those using these grounds, will at comparatively little expense, derive pleasure from passing through or near them.

In conclusion, we may be permitted to point out that very substantial progress has been made, through the courageous and generous effort of the Park Commissioners, the City Government and the citizens at large, in executing persistently and against much honest objection and doubt as to the expediency of the necessarily large expenditure, a comprehensive, well balanced, general scheme of public pleasure grounds carefully designed to meet the various requirements of the public, and to utilize or create such elements of natural or formal beauty as seemed appropriate. Not to mention smaller grounds, Cambridge Field, Broadway Square and the river bank improvement from Boylston Street to Cambridge Hospital were last summer (except for the smallness of newly planted trees) substantially completed and ready for the enjoyment of the patient and liberal citizens who helped to pay for them.

Respectfully submitted,

OLMSTED BROTHERS.

REPORT OF THE CITY ENGINEER

OFFICE OF CITY ENGINEER,
CITY HALL, CAMBRIDGE, December 1, 1898.

Geo. Howland Cox, Esq., President Cambridge Park Commission :—

DEAR SIR:— There have been employed five persons on engineering work connected with the Park Department during the year. The total expenditure for engineering has been $4,240.10.

The sea wall on Charles River near Main Street, of which mention was made in my last report, was completed in May, 1898. The total length is 2,518.6 feet, and the total amount paid the contractor was $77,629.63. 8,817 cubic yards of stone ballast were placed back of the wall at a cost of $12,961.14.

The work of filling the Esplanade and flats adjoining was begun by the contractors March 11, 1898, and has been continued with slight interruption night and day since. At this time the flats are substantially filled to the required grade, and the filling of the Esplanade is well advanced.

The material for filling — silt, sand, oyster shells, etc. — was taken by a hydraulic dredge in one operation from the bed of the river and deposited in place in the tract to be filled. At the Esplanade this filling is to be covered with at least a foot of good clean gravel. The cut shows the hydraulic dredging machine at work placing the gravel on the Esplanade.

The area of flats in possession of the City and which has been filled, is :—

City wharf lot, rear Main Street	35,991	square feet.
F. H. Rindge lot	10,635	" "
Esplanade, including sea wall	471,360	" "

Filled by special agreement with owner —

B. F. Brown lot	33,220	" "

The total payments made by the City to date on account of the filling of these lands and the Esplanade is $33,217.36.

A considerable attention was given to the work of improvement on the Esplanade on either side of Massachusetts Avenue. About 1,230 feet on the easterly side and about 1,160 feet on the westerly side have been finished, including 5,090 feet of gravel roadway and 4,780 feet of walks. In this connection, also, forty gutter catch-basins were built and about 1,710 feet of drainage pipe laid for the purpose of removing the surface water from the improved tract. Lines and grades for seeded areas, tree planting and setting curbstone, were also given.

At the Captain's Island grounds about 86,400 square feet, or nearly two acres, have been graded for a playground, and Magazine Street extension

filled from Granite Street to the park road, and the park road from Magazine Street to Brookline Street, a length of about 1,500 feet. 16,815 cubic yards of gravel were used in this work, all taken from the Charles River by the Bay State Dredging Company. As this filling crossed the outlet of the Pearl Street sewer, and would have caused a serious settlement, a section 350 feet long was relaid with a pile foundation, the expense being borne equally by the Park and Sewer Departments.

In order to exclude the salt water from the marsh land between Captain's Island and Brookline Street, a dyke became necessary on the river bank. Plans were accordingly prepared, and a contract made with Messrs. Nawn & Brock for the construction of a mud and turf dyke about 1,350 feet long, of sufficient height and stability to exclude tide water. This work is now well under way, about 450 feet of dyke having been completed and the rest being in a more or less advanced state of completion.

A plan was made of the changed and improved entrance to the parkway at Bath Street, a new lay-out of the street being adopted and the building restriction line on the parkway being extended to Mt. Auburn Street.

A survey and plan has also been made of the river bank, through the Cambridge Hospital grounds for proposed improvements there.

Plans were made for the improvement of Rindge Field and a gravel roadway on three sides of the field constructed, a total length of about 2,080 feet, and two catch-basins constructed for surface water.

Very truly,

L. M. HASTINGS,

City Engineer.

APPENDIX

ORDINANCES

PASSED BETWEEN MARCH 1, 1898, AND FEBRUARY 20, 1899

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*An Ordinance in Amendment of an Ordinance in Relation to Water Works.

Be it ordained by the City Council of the City of Cambridge, as follows:—

Section 24 of Chapter 26 of the Revised Ordinances of 1892, as amended by an Ordinance approved October 9, 1895, is hereby further amended by striking out the entire amendment of October 9, 1895, relating to the price of metered water, and inserting in place thereof the following:—

"The Water Board shall have power to ascertain by meter the quantity of water used in any case, and a meter shall be applied whenever, in the judgment of the Board, it is expedient. The charge for metered water shall be based on annual consumption, as follows:—

For the first 50,000 cubic feet, 15c. per 100 cubic feet.

From 50,000 to 200,000 cubic feet, 12c. per 100 cubic feet.

From 200,000 to 500,000 cubic feet, 11c. per 100 cubic feet.

From 500,000 cubic feet to 5,000,000 cubic feet, 8c. per 100 cubic feet.

When the water used by any one taker shall amount to more than five million cubic feet in any one year, commencing the first day of July, then the charge shall be at the rate of seven and one-half cents for each hundred cubic feet of the excess over that quantity.

In no case, however, shall the minimum charge for metered water be less than fifteen dollars per annum.

In addition to the charge for water used, an annual rental of two dollars for each meter shall be assessed, commencing April 1, 1898.

All water passing through a meter will be charged for, whether used or wasted.

If a meter gets out of order and fails to register, the consumer shall be charged at the average daily consumption as shown by the meter when in order.

All charges for metered water shall be made to the owners of the property."

The amended schedule shall take effect April 1, 1898, for all consumers whose use of water is less than 5,000,000 gallons during the year ending June 30, 1898; for consumers for more than 5,000,000 gallons during the year ending June 30, 1898, the amended schedule shall go into effect July 1, 1898.

[*Approved February* 12, 1898.]

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* Omitted from City Documents of year 1897 inadvertently.

An Ordinance in Amendment of an Ordinance Entitled Duties and Salaries.

Be it ordained by the City Council of the City of Cambridge, as follows: —

Chapter 27 of the Revised Ordinances of 1892 is hereby amended by adding at the end thereof the following new section: —

Section 33. Whenever, by reason of his length of service, the pay of any member of the fire department is to be increased, notice thereof shall be sent to the Mayor by the Chief Engineer, before placing the name of such member upon the pay roll at the increased rate of compensation.

[*Approved April* 6, 1898.]

An Ordinance in Amendment of an Ordinance Entitled City Clerk.

Be it ordained by the City Council of the City of Cambridge, as follows:—

Section 3 of Chapter 7 of the Revised Ordinances of 1892 is hereby amended by adding at the end thereof the following:—

"Six months before the expiration of the time when an assessment of betterments for any street improvement must be made, he shall notify the City Council of the date of said expiration."

[*Approved May* 26, 1898.]

An Ordinance in Amendment of an Ordinance Entitled Engineering.

Be it ordained by the City Council of the City of Cambridge, as follows: —

An Ordinance in amendment of Section 9 of Chapter 10 of the Revised Ordinances of 1892, approved April 17, 1895, is hereby repealed.

[*Approved May* 26, 1898.]

An Ordinance in Amendment of an Ordinance in Relation to Streets.

Be it ordained by the City Council of the City of Cambridge, as follows: —

Section 33 of Chapter 24 of the Revised Ordinances of 1892 is hereby amended by striking out the word "eight" in the fourth line and inserting in place thereof the word "seven."

[*Approved June* 16, 1898.]

An Ordinance in Relation to Children Under Sixteen Years of Age.

Be it ordained by the City Council of the City of Cambridge, as follows:—

SECTION 1. No child under sixteen years of age, shall be, loiter or remain upon any street, highway, park or other public way or place in this city after the hour of half past nine o'clock in the afternoon of any day, unless accompanied by, or under the control or care of a parent, guardian or other adult person, or performing or returning from employment or from the performance of some duty, directed in writing by said parent, guardian or other adult person, and no such child, while performing such duty, or returning from the performance thereof, or from employment, shall loiter upon any such street, highway, park or other public way or place.

SECT. 2. Any persons violating any of the provisions of this Ordinance shall be liable to a penalty not exceeding five dollars for each offence.

[*Approved July* 27, 1898.]

An Ordinance in Amendment of an Ordinance Entitled Fire.

Be it ordained by the City Council of the City of Cambridge, as follows; —

Section 9 of Chapter 11 of the Revised Ordinances of 1892, as amended by an ordinance approved October 28, 1896, is hereby further amended as follows, viz:—In the first line of the fourth paragraph by inserting after the word "of" the words "a lieutenant." Also in the second line by striking out the words "assistant engineman." Also by striking out the word "engineman" in the second sentence of the same paragraph and inserting in place thereof the word "lieutenant." Also by adding at the end of said section the following:—"There shall also be appointed from the permanent force, one permanent lieutenant of hook and ladder truck companies, whose duty shall be the same as that now performed by the call lieutenants of said truck companies, and in the absence of the captain, he shall have the care of the engine house and all city property therein. There shall also be created the position of permanent lieutenant of chemical engine companies, who shall be chosen from the permanent force, whose duty shall be the same as that now performed by the engineman of said chemical companies. Such permanent lieutenants to be assigned as the Chief Engineer may direct. The assistant engineman shall be designated and known as engineman, and in the absence of the permanent lieutenant, he shall have charge of the chemical engine house and all city property therein."

As amended this section will read as follows: —

Section 9. Each steam fire engine company shall consist of a captain, lieutenant, engineman, assistant engineman, driver of the steam fire engine, driver of the hose carriage and six hosemen.

The captain and lieutenant shall be nominated by the chief engineer for appointment by the Mayor and aldermen. The engineman, assistant engineman and the drivers shall be constantly employed, and shall at all time be in or about the engine-house, except when unavoidably absent, or excused from duty by the chief engineer.

The captain of each steam fire engine company shall have charge and direction of his company at fires.

The lieutenant of each steam fire engine company shall assist the captain in the discharge of his duties, and act as clerk of the company.

Each chemical engine company shall consist of a lieutenant, an engineman and driver. The lieutenant of each chemical engine company shall have charge and direction of his company at fires.

In addition to the permanent force before mentioned, there shall also be appointed three men who shall be constantly employed, and who shall be assigned as the chief engineer may direct.

There shall also be appointed from the permanent force, one permanent lieutenant of hook and ladder truck companies, whose duty shall be the same as that now performed by the call lieutenants of said truck companies, and in the absence of the captains he shall have the care of the truck house and all city property therein.

There shall also be created the position of permanent lieutenant of chemical engine companies, who shall be chosen from the permanent force, whose duty shall be the same as that now performed by the enginemen of said chemical companies. Such permanent lieutenants to be assigned as the chief engineer may direct.

The assistant engineman shall be designated and known as engineman, and in the absence of the permanent lieutenant he shall have charge of the chemical engine house and all city property therein.

[*Approved July* 27, 1898.]

An Ordinance in Amendment of an Ordinance Entitled Fire.

Be it ordained by the City Council of the City of Cambridge, as follows: —

Section 9 of Chapter 11 of the Revised Ordinances of 1892 as amended by an Ordinance approved October 28, 1896, is hereby further amended by striking out the word "three" in the third line and inserting in place thereof the word "six," also by adding at the end thereof the following: —

"Provided, however, that the number of members of the department other than those permanently employed shall be reduced by three."

As amended this portion of said section will read as follows: —

"In addition to the permanent force before mentioned, there shall also be appointed six men who shall be constantly employed, and who shall be assigned as the Chief Engineer may direct; provided, however, that the number of members of the department other than those permanently employed shall be reduced by three."

[*Approved September* 30, 1898.]

An Ordinance in Amendment of an Ordinance in Relation to the Construction, Maintenance and Inspection of Buildings.

Be it ordained by the City Council of the City of Cambridge, as follows:—

Section 50 of "An Ordinance in Relation to the Construction, Maintenance and Inspection of Buildings" approved July 1, 1897, is hereby amended in the second line of the first paragraph after the word "class" by inserting the words "buildings, the external frame work and walls of which consist of incombustible materials satisfactory to the Superintendent."

As amended this paragraph will read as follows:—

SECTION 50. All buildings hereafter erected except buildings of the first class, buildings, the external frame work and walls of which consist of incombustible materials satisfactory to the Superintendent, buildings of one story in height not exceeding twenty feet to the apex of the roof thereof, and buildings in whole or in part two stories in height not exceeding twenty feet to the apex of the roof of the one story portion and thirty feet to the apex of the roof of the two story portion, exclusive of such cupolas or towers as may be approved by the Superintendent, shall be so divided by brick partition walls, of the thickness prescribed for bearing partition walls and carried thirty inches above thereof, that no space inside any such building shall exceed in area five thousand square feet, except upon the recommendation of the Superintendent of Public Buildings, and the approval of the City Council, and in no case to exceed seven thousand square feet; and no existing wall in any building except a building of the first class shall be removed so as to leave an area not so enclosed of more than five thousand square feet, except upon the recommendation of the Superintendent and the approval of the City Council, and in no case to exceed seven thousand square feet, provided that in buildings having a height of not over thirty-five feet the height above the roof of the said brick partition walls need not exceed twelve inches.

[*Approved October* 12, 1898.]

An Ordinance in Amendment of an Ordinance Entitled Fire.

Be it ordained by the City Council of the City of Cambridge, as follows:—

Section 8 of Chapter 11 of the Revised Ordinances of 1892 is hereby amended by adding at the end thereof the following: —

"Whoever is appointed hereafter to any position in the fire department may be retired from the service at any time after he reaches the age of sixty years, at the discretion of the Mayor, with the approval of the Board of Aldermen."

[*Approved October* 12, 1898.]

An Ordinance Establishing the Salaries of certain Permanent Lieutenants of the Fire Department.

Be it ordained by the City Council of the City of Cambridge, as follows:—

The salaries of permanent Lieutenants of Hook and Ladder Truck Companies in the Fire Department shall be at the following rates, per annum: —

For first twelve months of service	$1,020 00
For second twelve months of service	1,035 00
After two years of service	1,050 00

[*Approved October* 19, 1898.]

An Ordinance in Amendment of an Ordinance in Relation to the Construction, Maintenance and Inspection of Buildings.

Be it ordained by the City Council of the City of Cambridge, as follows:—

Section 31 of an Ordinance in Relation to the Construction, Maintenance and Inspection of Buildings, approved July 1, 1897, is hereby amended by transposing the words therein "without the approval of the City Council," and placing the same after the word "house" in the seventh line thereof; also inserting the word "such" before the word "line" in the ninth line; also by striking out the words "such line" before the word "does" at the end of the seventh line, and inserting the word "it," so as to read as follows:

SECTION 31. No building hereafter erected or altered, which is to be used in whole or part for stable purposes, shall be built nearer than five feet to any adjoining lot nor, if there is a dwelling house upon the adjoining lot, be nearer than fifteen feet to such dwelling house, without the approval of the City Council, except that on the rear line of a lot such stable may be within eighteen inches of such line when it does not intersect the line of any public street.

[*Approved December* 22, 1898.]

An Ordinance in Amendment of an Ordinance Entitled Fire.

Be it ordained by the City Council of the City of Cambridge, as follows:—

Section 8 of Chapter 11 of the Revised Ordinances of 1892, as amended by an Ordinance approved October 12, 1898, is hereby further amended by adding the following: —

"Whoever is appointed hereafter as a member of the fire department, shall, before receiving such appointment, be subjected to a satisfactory physical examination."

[*Approved December* 22, 1898.]

An Ordinance Repealing Chapter Forty-one of the Revised Ordinances of Eighteen Hundred and Ninety-two.

Be it ordained by the City Council of the City of Cambridge, as follows:—

Chapter 41 of the Revised Ordinances of 1892, being an ordinance entitled "Pawnbrokers," is hereby repealed.

[*Approved December* 28, 1898.]

An Ordinance in Amendment of an Ordinance Entitled Junk and Second-hand Articles.

Be it ordained by the City Council of the City of Cambridge, as follows:—

Chapter 40 of the Revised Ordinances of 1892, is hereby amended by substituting in place thereof the following, to wit: —

Chapter 40.

JUNK, OLD METALS AND SECOND-HAND ARTICLES.

Section 1. No person, corporation, member of a co-partnership or firm shall be a dealer in or keeper of a shop for the purchase, sale or barter of junk, old metals or second-hand articles, or collect or be a dealer in rags in this City unless duly licensed therefor by the Board of Aldermen, and unless such person, corporation, co-partnership or firm complies with all lawful Ordinances and laws now and hereafter enacted and passed in reference and applicable to junk, old metals and second-hand articles.

Sect. 2. Each license issued to such dealers in junk, old metals and second-hand articles and collector and dealer in rags shall set forth the name of the party licensed, the nature of the business, and the building or place in which it is carried on, and shall continue in force until the first day of May next ensuing, unless sooner revoked. The place of business shall not be changed during the continuance of the license except by special consent of the Board of Aldermen to removal is obtained. The fee for such license shall be two dollars. No such license shall be transferable.

Sect. 3. Every such dealer in or keeper of a shop for the purchase, sale or barter of junk, old metals, or second-hand articles, shall keep a book in which shall be legibly written in the English language at the time of every purchase of any such article, a description thereof, the name, age and residence, giving street and number, when possible, of the person from whom and the day and hour when such purchase was made. No entry in such book shall be changed, erased, obliterated or defaced. Such book, any such shop and all articles of merchandise therein shall at all times be open to the inspection of the Mayor and Aldermen, or either of them, and of any person by them or either of them respectively authorized in writing to make such inspection upon exhibiting such written authority to such dealer or keeper.

Sect. 4. Every keeper of such shop as is mentioned in the preceding section shall put in some suitable and conspicuous place on his shop a sign having his name and occupation legibly inscribed thereon in large letters, so that the same may be distinctly seen.

Sect. 5. No keeper of such shop shall, directly or indirectly, either purchase or receive by way of barter or exchange any junk, rags, old metals or second-hand articles of a minor or apprentice, knowing or having reason to

believe him to be such, without the consent in writing of the parent or guardian of such minor or master of such apprentice.

SECT. 6. No article purchased or received by any such dealer or keeper of such shop shall be sold until a period of at least one week from the date of its purchase or receipt has elapsed.

SECT. 7. No keeper of any such shop shall have his shop open for the transaction of business nor shall he purchase or sell or barter any junk, old metals or second-hand articles except between sunrise and ten o'clock in the evening of any week day.

SECT. 8. Every vehicle used in the collection of junk, old metals, rags or second-hand articles shall be at all times subject to the inspection of the Mayor or Board of Aldermen, or either of them, or of any person by them or either of them respectively authorized in writing to make such an inspection upon exhibiting such written authority to the person driving or having charge of such vehicle. Every such vehicle shall have the name of the owner and the number of his license placed upon the outside of each side of his vehicle, in plain, legible letters and figures of not less than one and one-half inches in height, and so that the same may be distinctly seen.

SECT. 9. A violation of any provision of this or any subsequent Ordinance that may be passed in the premises shall of itself be sufficient cause and reason to revoke any such license. The Board of Aldermen reserves the right at any time for any other cause sufficient to them to revoke any such license.

SECT. 10. Whoever not being so licensed keeps such shop or is such collector, dealer or being licensed keeps such shop or is such dealer in any other place or manner than that designated in the license shall forfeit twenty dollars for each offence; and whoever violates any provision of this Ordinance or any rule, regulation or restriction contained in his license, shall forfeit a sum not exceeding twenty dollars for each offence.

[*Approved December* 28, 1898.]

REGULATIONS

OF THE BOARD OF ALDERMEN, WITH REFERENCE TO PAWNBROKERS AND SMALL LOANS

Rules in Relation to Pawnbrokers, Dealers in Junk, Old Metals and Second-hand Articles.

RULE 1. No person, corporation, member of a co-partnership, or firm shall in this City, engage in or carry on the business of loaning money upon mortgages, deposits or pledges of wearing apparel, jewelry, ornaments, household furniture or other personal property (excepting, however, stocks, bonds, notes or other written or printed evidence of ownership of property or of indebtedness to the holder or owner of any such securities) or of purchasing such property on condition of selling the same back again at a stipulated price, unless such person, corporation, co-partnership or firm is licensed therefor by the Board of Aldermen of this City as pawnbroker, and unless such person, corporation, co-partnership or firm complies with all lawful rules, regulations and laws now and hereafter adopted, passed and enacted in reference and applicable to pawnbrokers.

RULE 2. No person, corporation, co-partnership or firm licensed as a pawnbroker in this City, shall therein make any loan secured by mortgage or pledge of household furniture or any other personal property exempt from attachment or by assignment of wages for personal service, for less than two hundred dollars, and at a rate of interest greater than twelve per cent, without first having obtained a license from the Board of Aldermen of this City for carrying on such business.

RULE 3. Each license issued to a pawnbroker shall set forth the name of the party licensed, the nature of the business, and the building or place in which it is to be carried on; and shall continue in force one year from the date thereof, unless sooner revoked. The place of business shall not be changed during the continuance of the license except special consent of the Board of Aldermen to removal is obtained. The fee for such license shall be fifty dollars.

No such license shall be transferable.

RULE 4. No pawnbroker shall charge upon loans made by them a greater rate of interest than as follows, to wit:—

On the sum of $1.00 or less, first week, 2 cents; each week after, 2 cents.

On a sum of $1.00 to $3.00, first week, 2½ per cent; each week after, 2 per cent.

On a sum of $3.00 to $10.00, first week, 2 per cent; each week after, 1½ per cent.

On a sum of $10.00 to $25.00, first week, 1¾ per cent; each week after, 1 per cent.

On a sum of $25.00 to $50.00, first week, 1 per cent; each week after, ¾ per cent.

On a sum of $50.00 to $100.00, first week, ¾ per cent; each week after, ½ per cent.

On a sum of $100.00 to $200.00, first week, ½ per cent; each week after, ¼ per cent.

RULE 5. Every pawnbroker shall keep at his place of business a book in which shall be legibly written in the English language at the time of making every such loan a minute and accurate account and description of the goods, articles or things pawned or pledged, particularly mentioning any prominent or descriptive marks on the same, the amount of money loaned thereon, the day and hour of pledging the same, the rate of interest to be paid on such loan, with the name, age and residence, giving street and number when possible, of the person pawning or pledging such goods, articles or things. No entry in said book shall be changed, erased, obliterated or defaced.

RULE 6. Every such pawnbroker shall at the time of making such loan deliver to the person pawning or pledging any goods, article or thing, a memorandum or note numbered and signed by him, in a form satisfactory to the chief of police, containing the substance of the entry required to be made in his book by the preceding rule, and no charge shall be made or required by any pawnbroker for any such entry, memorandum or note.

RULE 7. Said book mentioned in rule 5 and the premises at which the business is carried on, all things pawned or pledged and stored therein, shall at all reasonable times be open to the full inspection of the mayor, chief, deputy chief, captains, chief inspector of police, any member of the district police, or any person who shall be duly authorized in writing for that purpose by any or either of them, upon exhibiting such written authority to the pawnbroker.

RULE 8. Every such pawnbroker shall each day, before twelve o'clock M., cause to made out and delivered to the police captain of the district in which his business is conducted, a substantial copy of the entry required to be made in his book during the preceding twenty-four hours, and the number of the note or memorandum given by him.

RULE 9. Every such pawnbroker shall post in his office or in some conspicuous way at his place of business a printed copy of Chapter 497 of the acts of 1895, and sections seven, eight, ten, eleven and twelve of Chapter 192, of all acts since passed and as they may hereafter be passed in amendment, supplementary or in repeal of the chapter and several sections just enumerated.

RULE 10. No such pawnbroker shall directly or indirectly receive any article in pawn or pledge of any minor, knowing, or having reasonable cause to believe him to be such, without the consent in writing of the parent or guardian of such minor.

RULE 11. A violation of any of these rules or of any subsequent rules that may be adopted in the premises shall of itself be sufficient cause and reason to revoke any such license. The board of aldermen reserves the right at any time for any other cause sufficient to them to revoke any license issued to any such pawnbroker.

Rule 12. Every such pawnbroker shall at the time of receiving his license file with the city clerk a bond to the city with two responsible sureties, to be approved by the Mayor in the penal sum of three hundred dollars, which bond shall be conditioned for the faithful performance of the duties and obligations pertaining to the business so licensed.

[*Approved December* 22, 1898.]

Rules and Regulations Concerning Small Loans.

1. The Board of Aldermen, upon petition in form by them prescribed, will license such persons as to them may seem suitable to make loans secured by mortgage or pledge of household furniture or other personal property exempt from attachment, or by assignment of wages for personal service, for less than two hundred dollars, and at a rate of interest greater than 12 per cent, pursuant to and subject to the provisions of Chapter 577 of the Acts of the Legislature of Massachusetts of the year 1898.

All such licenses shall continue in force for one year from the date thereof.

2. Applications for such licenses shall be made at least one month before the same are to be issued, and shall be published at the expense of the applicant, to be paid in advance, by the Board of Aldermen, in two or more daily newspapers published in the City of Cambridge. Applications for such licenses shall be examined into and reported on by the Chief of Police. A fee of twenty dollars shall be paid for each such license at the time the same is issued.

3. Interest may be charged by persons licensed under this rule as follows: On loans not exceeding fifty dollars, at the rate of 24 per centum per annum; on loans of over fifty dollars, at the rate of 18 per centum per annum.

4. All persons licensed under this rule shall make a report to the said Board in writing, of every suit brought upon any bond given by such licensee pursuant to the provisions of Statute 1898, Chapter 577, not later than ten days from the entry of the writ or other process by which such suit was commenced, which statement shall set forth the ad damnum of the writ and the names and residences of the parties to such suit, the court in which it was brought and the docket number thereof, if any. And when any such suit is finally disposed of, either by judgment or decree, or by order of the court, or by settlement, such licensee shall, within 24 hours thereof, give notice to said Board, in writing, setting forth the result of such suit or settlement, and the amount and terms of such judgment, order or decree, and the terms of such settlement, and the amount or other consideration given or promised therefor.

5. All persons licensed under this rule shall keep at their places of business a book in which shall be legibly written in the English language, at the time of making every such loan, a minute and accurate account and description of the goods, articles and things pawned or pledged (particularly mentioning prominent or descriptive marks on the same) or specifying the wages assigned, the amount of money loaned thereon, the day and hour when the mortgage or assignment was made, the date on which the debt is to become due, the rate of interest to be paid thereon, calculated at an annual rate of percentage, together with the name, age, residence, giving street and number, when possible, of the person pawning or pledging such goods, articles or things, or assigning such wages.

Every such licensee shall enter in such book at the time of each payment by the borrower, the date of such payment, the amount then paid, a statement whether it is interest or a payment on account of principal, a statement of the total amount, both principal and interest, previously paid on such loan, and a statement of the amount still due on the principal after such payment.

There shall be a separate page or a separate portion of a page in such book for each loan, numbered consecutively, in which shall be entered all the entries and transactions relating to such loan and the number on such page or portion of a page shall correspond with the number on the memorandum or note to be furnished to the borrower as herein after specified. No entry in said book shall be changed, erased, obliterated or defaced.

6. Every such licensee shall at the time of making such loan deliver to the person pawning or pledging any goods, article or thing, a memorandum or note numbered and signed by him, in a form satisfactory to the Chief of Police, containing the substance of the entry required to be made in his book by the preceding rule, and no charge shall be made or required by any such licensee for any such entry, memorandum or note.

Whenever any payment is made on account of any such loan the person receiving the payment, or his principal, shall, when payment is taken, endorse on the back of such memorandum or note the date of such payment, the amount then paid, a statement whether it is interest or a payment on account of principal, a statement of the total amount, both principal and interest previously paid on such loan, and a statement of the amount still due on the principal after such payment. And the person receiving such payment, or his principal, shall sign such endorsement. If such memorandum or note is lost or destroyed, the lender shall furnish the borrower, on demand, a duplicate of the same free of charge, setting forth all the endorsements that were or ought to have been upon the original or upon any duplicate thereof, at the time of its loss.

7. Said book mentioned in Rule 5 and the premises at which the business is carried on, all things pawned or pledged and stored therein, shall at all reasonable times be open to the full inspection of the Mayor, Chief, Deputy Chief, Captains, Chief Inspector of Police, any member of the District Police or any person who shall be duly authorized, in writing, for that purpose by any or either of them, upon exhibiting such written authority to the licensee.

8. Every such licensee shall each day, before 12 o'clock M., cause to be made out and delivered to the Police Captain of the district in which his business is conducted, a substantial copy of the entry required to be made in his book during the preceding twenty-four hours and the number of the note or memorandum given by him.

The information so received by the Chief of Police shall not be divulged by him except when he is required so to do by law or by order of the Board of Aldermen.

9. No such licensee shall directly or indirectly receive any article in pawn or pledge of any minor, knowing or having reasonable cause to believe him to be such, without the consent in writing of the parent or guardian of such minor.

10. A violation of any of these rules or of any subsequent rules that may be adopted in the premises, shall of itself be sufficient cause and reason to revoke any such license. The Board of Aldermen reserves the right at any time

for any other cause sufficient to them, to revoke any license issued to any such licensee.

11. Every such licensee, shall at the time of receiving his license, file with the City Clerk a bond to the city with two responsible sureties, to be approved by the Mayor, in the penal sum of two hundred dollars, which bond shall be conditioned for the faithful performance of the duties and obligations pertaining to the business so licensed.

[*Approved December* 28, 1898.]

MAYORS OF THE CITY OF CAMBRIDGE

(FROM 1846 TO 1899 INCLUSIVE)

James D. Green	From May,	1846,	to April,	1848
Sidney Willard	" April,	1848,	to April,	1851
George Stevens	" April,	1851,	to April,	1853
James D. Green	" April,	1853,	to April,	1854
*Abraham Edwards	" April,	1854,	to January,	1855
Zebina L. Raymond	" January,	1855,	to January,	1856
John Sargent	" January,	1856,	to January,	1860
†James D. Green	" January,	1860,	to July 24,	1861
‡Charles Theo. Russell	" July 31,	1861,	to January,	1863
George C. Richardson	" January,	1863,	to January,	1864
Zebina L. Raymond	" January,	1864,	to January,	1865
J. Warren Merrill	" January,	1865,	to January,	1867
Ezra Parmenter	" January,	1867,	to January,	1868
Charles H. Saunders	" January,	1868,	to January,	1870
Hamlin R. Harding	" January,	1870,	to January,	1872
Henry O. Houghton	" January,	1872,	to January,	1873
Isaac Bradford	" January,	1873,	to January,	1877
Frank A. Allen	" January,	1877,	to January,	1878
Samuel L. Montague	" January,	1878,	to January,	1880
James M. W. Hall	" January,	1880,	to January,	1881
James A. Fox	" January,	1881,	to January,	1885
William E. Russell	" January,	1885,	to January,	1889
Henry H. Gilmore	" January,	1889,	to January,	1891
Alpheus B. Alger	" January,	1891,	to January,	1893
William A. Bancroft	" January,	1893,	to January,	1897
Alvin F. Sortwell	" January,	1897,	to January,	1899
Edgar R. Champlin	" January,	1899.	Now in office.	

* Municipal year changed. † Resigned. ‡ First elected by the City Council.

PRESIDENTS OF THE BOARD OF ALDERMEN

1888 Edward W. Hincks.
1889 John H. Corcoran.
1890 Alvin F. Sortwell.
1891 William A. Bancroft.
1892 William A. Bancroft.
1893 John R. Fairbairn.
1894 John G. Thorogood.
1895 John R. Fairbairn.
1896 John R. Fairbairn.
1897 Russell Bradford.
1898 Russell Bradford.
1899 Walter C. Wardwell.

PRESIDENTS OF THE COMMON COUNCIL

1846 Isaac Livermore.
1847 John Sargent.
1848 John C. Dodge.
1849 Samuel P. Heywood.
1850 Samuel P. Heywood.
1851 John S. Ladd.
1852 John Sargent.
1853 John Sargent.
1854 John C. Dodge.
1855 Alanson Bigelow.
1856 Ezra Ripley. Resigned January 31.
1856 George S. Saunders. Elected January 31.
1857 George S. Saunders.
1858 James C. Fisk.
1859 James C. Fisk.
1860 Hamlin R. Harding.
1861 Hamlin R. Harding.
1862 Jared Shepard. Resigned September 17.
1862 Knowlton S. Chaffee. Elected September 24.
1863 George S. Saunders.
1864 George S. Saunders.
1865 John S. March.
1866 John S. March.
1867 Marshall T. Bigelow.
1868 Knowlton S. Chaffee. Resigned February 4.
1868 Henry W. Muzzey. Elected February 4.
1869 Henry W. Muzzey.
1870 Joseph H. Converse.
1871 Joseph H. Converse.
1872 Alvaro Blodgett.
1873 Alvaro Blodgett. Resigned June 17.
1873 Francis H. Whitman. Elected June 17.
1874 George F. Piper.
1875 George F. Piper.
1876 Frank A. Allen.
1877 Perez G. Porter.
1878 George S. Saunders.
1879 George S. Saunders.
1880 Charles Walker.
1881 Charles Walker.
1882 George H. Howard.
1883 George H. Howard.
1884 George H. Howard.
1885 Cornelius G. H. Bennink.
1886 John H. Corcoran.
1887 John H. Corcoran.
1888 Alvin F. Sortwell.
1889 Edward A. Bingham.
1890 Edward A. Bingham.
1891 Edward C. Wheeler.
1892 Herbert A. Chase.
1893 J. Henry Russell.
1894 Charles M. Conant.
1895 John L. Odiorne.
1896 John L. Odiorne.
1897 Albert S. Apsey.
1898 George E. Saunders.
1899 William F. Brooks.

GOVERNMENT OF THE CITY OF CAMBRIDGE, 1899

Mayor.

HON. EDGAR R. CHAMPLIN, 8 Dana Street.

Board of Aldermen.

President.

WALTER C. WARDWELL.

Ward One.

GEORGE E. SAUNDERS	5 Concord Avenue.
WALTER C. WARDWELL	465 Broadway.

Ward Two.

JEREMIAH F. DONOVAN	108 Inman Street.
CLEMENT G. MORGAN	265 Prospect Street.

Ward Three.

JOHN J. AHERN	62 Fifth Street.
JOHN T. SHEA	119 Third Street.

Ward Four.

EBEN H. GOOGINS	91 Franklin Street.
HAMILTON H. PERKINS	126 Magazine Street.
WARREN F. SPALDING	140 Chestnut Street.

Ward Five.

HANS L. CARSTEIN	45 Cogswell Avenue.
ISAAC MCLEAN	2218 Massachusetts Avenue.

Clerk.

EDWARD J. BRANDON.

Messenger.

FRANCIS L. PRATT.

Regular Meetings on Tuesday Evenings at 8 o'clock.

Common Council.

President.

WILLIAM F. BROOKS.

Ward One.

WILLIAM F. BROOKS	35 Aberdeen Avenue.
JAMES D. HILL	29 Ash Street.
JOHN D. MERRILL	12 Mount Auburn Street.
THORNDIKE SPALDING	75 Sparks Street.

Ward Two.

FRED A. FERRIS	147 Washington Street.
ALBERT B. LONG	5 Ellsworth Park.
JAMES J. MALLEY	160 Willow Street.
FRANK MCLAUGHLIN	122 Tremont Street.
WILLIAM M. WADDEN	125 Hampshire Street.

Ward Three.

JAMES A. BROWN	106 Sixth Street.
GEORGE H. DINAN	66 Spring Street.
HENRY F. LEHAN	26A Fourth Street.
WILLIAM H. QUINN	24 Winter Street.

Ward Four.

EDGAR P. BAKER	33 Pearl Street.
FRED L. BEUNKE	75½ Franklin Street.
TIMOTHY W. GOOD	253 Putnam Avenue.
ALFRED E. HUGHES	52 Pleasant Street.
WILLIAM J. ROUNDS	351 Pearl Street.

Ward Five.

ALBERT H. HALL	30 Mt. Pleasant Street.
WILLIAM H. LEWIS	55 Frost Street.

Clerk.

EDWARD A. COUNIHAN.

Pages.

CHARLES M. JONES.

*FRANK T. EVANS.

Regular Meetings on Tuesday Evenings at 8 o'clock.

* Appointed January 31, 1899, vice Charles M. Jones, resigned.

COMMITTEES OF THE CITY COUNCIL.

Joint Standing Committees.

Accounts. Aldermen McLean and Perkins; Councilmen Baker, Malley and Merrill.

Almshouse. Aldermen Googins and McLean; Councilmen Merrill, Brown and Ferris.

Assessors' Department. Alderman Ahern; Councilmen Hill and Rounds.

City Engineering. Aldermen Shea and Carstein; Councilmen Lewis, Dinan and Wadden.

Claims. President Wardwell, Aldermen Morgan, Spalding and McLean: President Brooks, Councilmen Long, Spalding, Beunke, Lewis and Lehan.

Electric Wires. Aldermen McLean and Perkins; Councilmen Hughes, Ferris and Lewis.

Finance. President Wardwell, Aldermen Spalding, Ahern and Saunders; President Brooks, Councilmen Wadden, Baker, Hill, Hall and Quinn.

Fire Department. Aldermen Donovan and Googins; Councilmen Wadden, Hughes and Ferris.

Health. Aldermen Googins and McLean; Councilmen Dinan, McLaughlin and Rounds.

Lamps. Aldermen Donovan and Carstein; Councilmen Long, Good and Brown.

Legislative Matters. President Wardwell, Aldermen Spalding and Shea; President Brooks, Councilmen McLaughlin, Spalding and Lehan.

Ordinances. Aldermen Morgan and Perkins; Councilmen McLaughlin, Spalding and Beunke.

Parks. Aldermen Spalding and Ahern; Councilmen Hill, Hall and Dinan.

Printing. Aldermen Carstein and Perkins; Councilmen Long, Good and Quinn.

Public Instruction. Aldermen Shea and Saunders; Councilmen Ferris, Beunke and Merrill.

Public Property. Aldermen Ahern and McLean; Councilmen Good, Rounds and Malley.

Roads and Bridges. Aldermen Shea and Donovan; Councilmen McLaughlin, Hughes and Dinan.

Rules and Orders. Aldermen Morgan and Perkins; Councilmen Lewis, Hill and Lehan.

Water Supply. Aldermen Donovan and Perkins; Councilmen Merrill, Malley and Brown.

Standing Committees of the Board of Aldermen.

Bonds. Aldermen Perkins, Carstein and Saunders.

Claims. President Wardwell, Aldermen Morgan, Spalding and McLean.

Elections and Returns. Aldermen Donovan, Ahern and Carstein.

Fire Department. Aldermen Donovan, Googins and Ahern.

Health. Aldermen Googins, McLean and Morgan.

Licenses. Aldermen Googins, Morgan and Carstein.

Parks. Aldermen Spalding, Ahern and McLean.

Police. Aldermen Spalding, Shea and Saunders.

Roads and Bridges. Aldermen Shea, Donovan and McLean.

Rules and Orders. Aldermen Morgan, Perkins and Carstein.

Sewers. Aldermen McLean, Donovan and Googins.

Soldier's Aid. Aldermen Ahern, Morgan, Googins, Carstein and Saunders.

Street Railways. Aldermen McLean, Shea and Perkins.

Standing Committees of the Common Council.

Bills in the Second Reading. Councilmen Lehan, Quinn and Hall.

Elections and Returns. Councilmen Quinn, Hughes and Hall.

Enrolled Ordinances. Councilmen Baker, Brown and Wadden.

Joint Special Committee.

Publication of Mayor's Inaugural Address. Aldermen Donovan and Perkins; Councilmen Spalding, Brown and Malley.

Recommendations in Mayor's Inaugural Address. Aldermen Spalding and Carstein; Councilmen Spalding, Hall and Wadden.

Consideration of Matters referred from last City Council. Aldermen Spalding and Ahern; Councilmen Hughes, McLaughlin and Hill.

Consideration of Amendments to Rules and Orders of City Council. Aldermen Morgan, Perkins, McLean; Councilmen Lewis, Hill, Lehan. Long and McLaughlin.

Central Fire Alarm Station. Joint Committees on Fire Department and on Electric Wires.

Bridges (Cambridge Bridge). Aldermen Perkins and Saunders; Councilmen Baker, Merrill and Malley.

Special Committees of Board of Aldermen.

Consideration of Matters referred from last Board of Aldermen. Aldermen Spalding, Ahern and Donovan.

Aid to Families of Volunteers for the War with Spain. Aldermen Shea, Donovan, McLean, Saunders and Perkins.

Consideration of Amendments to Rules and Orders of Board of Aldermen. Aldermen Morgan, Perkins and McLean.

Special Committee of Common Council.

Consideration of Amendments to Rules and Orders of Common Council. Councilmen Lewis, Hill, Lehan, Long and McLaughlin.

DEPARTMENTS AND BOARDS.

Executive Department.

EDGAR R. CHAMPLIN, . . . *Mayor.*
Edward A. Counihan, . . . *Mayor's Clerk.*
Office Hours: 8 A.M. to 3 P.M.
Office, Rooms 17 and 18, City Hall. Telephone 463.

City Clerk Department.

EDWARD J. BRANDON, . . *City Clerk.*
Albert M. Pear, ... *Assistant City Clerk.*
Office Hours: 8 A.M. to 3 P.M.
Office, Rooms 8 and 9, City Hall. Telephone 419.

Treasury Department.

WILLIAM W. DALLINGER, *City Treasurer and Collector of Taxes.*
Office Hours: 8 A.M. to 2 P.M.
Office, Rooms 3 and 4, City Hall. Telephone 602.

Auditing Department.

HARRY T. UPHAM, . . . *City Auditor.*
Office Hours: 8 A.M. to 2 P.M.
Office, Rooms 1 and 2, City Hall. Telephone 602.

Clerk of Committees Department.

JOHN MCDUFFIE, ... *Clerk of Committees.*
Office Hours: 8 A.M. to 3 P.M.
Office, Room 16, City Hall. Telephone 125.

City Messenger Department.

FRANCIS L. PRATT, . . . *City Messenger.*
Office Hours: 8 A.M. to 5 P.M.
Office, Room 11, City Hall. Telephone 507.

Law Department.

GILBERT A. A. PEVEY, . . *City Solicitor.*
Office Hours (at City Hall): Saturdays, 8 A.M. to 12 M.
Office, Room 17, City Hall. Telephone 463.
Boston Office, 5 Tremont Street. Telephone 1071, Haymarket.

Engineering Department.

LEWIS M. HASTINGS, . . . *City Engineer.*
Theodore L. Pike, . . . *Sup't of Sewers.*

Office Hours: 8 A.M. to 5 P.M.
Office, Rooms 30 and 31, City Hall. Telephone 471.

Fire Department.

THOMAS J. CASEY, . . . *Chief.*

Office Hours: 9 to 10 A.M.
Office, Room 23, City Hall. Telephone 507.

Inspection, etc., of Buildings Department.

WILLIAM H. GRAY, *Sup't of Public Buildings and Inspector of Buildings.*

Office Hours: 8 A.M to 2 P.M.
Office, Room 20, City Hall. Telephone 125.

Health Department—Board of Health.

E. EDWIN SPENCER, M.D. . . *Chairman.*

Term, three years.

CHARLES HARRIS . . . . Term expires 1900.
E. EDWIN SPENCER, M.D. . . Term expires 1901.
THOMAS HUNT . . . . Term expires 1902.

JAMES B. SOPER . . . . *Clerk.*
EDWIN FARNHAM, M.D. . . *Medical Inspector.*

Office Hours: 8 A.M. to 4 P.M.
Rooms 25 and 26, City Hall. Telephone 345.

Police Department.

LOTHROP J. CLOYES . . . *Chief of Police.*

Office Hours: 8 A.M. to 6 P.M.
Office at Central Square Building. Telephone 423.

Street Department.

CHARLES A. BROWN . . . *Supt. of Streets.*

Office Hours: 8 A.M. to 4 P.M.
Office, Room 12, City Hall. Telephone 435.

Inspection of Milk and Vinegar Department.

FRANK A. DUNBAR, M.D. . . { *Inspector of Milk.* / *Inspector of Vinegar.*

Office Hours: Mondays, Wednesdays and Fridays, 9.30 to 11.30 A.M.
Office, Room 27, City Hall. Telephone, 507.

Assessors' Department — Board of Assessors.

Term, three years.

Joshua G. Gooch, *Chairman* .	Term expires 1899.
John M. Davis, *Secretary* . .	Term expires 1900.
Andrew J. Green . . .	Term expires 1901.

Office Hours: 8 A.M. to 3 P.M.

Office, Rooms 21 and 22, City Hall. Telephone 507.

Lamp Department.

Charles F. Hopewell . . *Supt. of Lamps.*

Office Hours: 8 A.M. to 2 P.M.

Office, Room 20, City Hall. Telephone 125.

Inspection, etc., of Electric Wires Department.

(Same as Lamp Department.)

Inspection of Animals and Provisions Department.

Charles E. Hadcock, M.D.V., *Inspector of Animals and Provisions.*

Residence, 21 Ellery Street. (No office or hours.)

Bridge Department.

William J. Marvin, *Bridge Commissioner and Harbor Master.*

Residence, 58 Trowbridge Street. (No office or hours.)

Cemetery Department — Cemetery Commissioners.

George S. Saunders, . . *Chairman.*

Term, three years.

William A. Bertsch . . .	Term expires 1900.
Charles O. Welch . . .	Term expires 1900.
Nathan C. Lombard . . .	Term expires 1901.
John H. H. McNamee . .	Term expires 1901.
Herbert A. Chase . . .	Term expires 1902.
George S. Saunders . .	Term expires 1902.

Edward J. Brandon . . .	*Clerk of the Board.*
Charles S. Childs . . .	*Sup't of Cemetery.*

Office Hours: at Cemetery, 8 A.M. to 5 P.M.

Office, at Cemetery on Coolidge Avenue. Telephone 25-3

School Committee.

EDGAR R. CHAMPLIN, Mayor . *Chairman ex officio.*

Term, three years.

Ward One.

FRANK W. TAUSSIG . . .	Term expires 1899.
WILLIAM TAGGARD PIPER . .	Term expires 1900.
ELIZABETH Q. BOLLES . . .	Term expires 1901.

Ward Two.

ROBERT O. FULLER . . .	Term expires 1899.
CAROLINE L. EDGERLY . . .	Term expires 1900.
GEORGE W. BICKNELL . . .	Term expires 1901.

Ward Three.

EDWARD B. MALLEY . . .	Term expires 1899.
JOSEPH J. KELLEY . . .	Term expires 1900.
CARRIE S. FAIRBAIRN . . .	Term expires 1901.

Ward Four.

MARY E. MITCHELL . . .	Term expires 1899.
CHARLES F. WYMAN . . .	Term expires 1900.
ROBERT E. ELY	Term expires 1901.

Ward Five.

SETH N. GAGE	Term expires 1899.
CAROLYN P. CHASE . . .	Term expires 1900.
FREDERIC W. TAYLOR . . .	Term expires 1901.

Secretary and School Supply Agent.

SANFORD B. HUBBARD.

Superintendent of Schools.

FRANCIS COGSWELL.

Office Hours: 8.30 A.M. to 5 P.M.

Office, Rooms 13, 14, 15, City Hall. Telephone 445.

Sealer of Weights and Measures Department.

ALBERT F. ROBERTS, . *Sealer of Weights and Measures.*

Office Hours: { Fridays, 8 A.M to 4 P.M.
Saturdays, 8 A.M. to 12 M.

Office, Room 34, City Hall. Telephone 507.

City Physician.

LEWIS L. BRYANT.

Residence, 782 Massachusetts Avenue. Telephone 522-2.

Public Library Department—Trustees of Cambridge Public Library.

WILLIAM TAGGARD PIPER . . *President.*

For one year.

WILLIAM T. PIPER, of School Committee.

Citizens at large. Term, three years.

AUGUSTINE J. DALY . . .	Term expires 1900.
WILLIAM J. ROLFE . . .	Term expires 1900.
THOMAS W. HIGGINSON . .	Term expires 1901.
EDWARD C. WHEELER . .	Term expires 1901.
ALBERT M. BARNES . . .	Term expires 1902.
JABEZ FOX	Term expires 1902.

WILLIAM L. R. GIFFORD . *Secretary and Treasurer.*
WILLIAM L. R. GIFFORD . . *Librarian.*

Library Open: 10 A.M to 8 P.M.

Reading Room: 10 A.M. to 10 P.M.

Sunday: 2 to 10 P.M.

Office, at Library Building, Broadway, Irving and Trowbridge Streets. Telephone 610.

Water Works Department—Cambridge Water Board.

JAMES M. W. HALL . . . *President.*

Term, five years.

FRANK A. ALLEN . . .	Term expires 1899.
GEORGE H. HOWARD . . .	Term expires 1900.
JAMES M. W. HALL . . .	Term expires 1901.
STILLMAN F. KELLEY . . .	Term expires 1902.
WELLINGTON FILLMORE . .	Term expires 1903.

WALTER H. HARDING . . . *Clerk of the Board.*
EDWIN C. BROOKS . . . *Sup't of Water Works.*
WALTER H. HARDING . . . *Water Registrar.*

Office Hours: 8 A.M. to 4 P. M.

Office, Rooms 5 and 6, City Hall. Telephone 430.

Registrars of Voters.

. . . *Chairman.*

Term, four years.

JAMES COX	Term expires 1899.
WILLIAM J. BREEN . . .	Term expires 1900.
ISAAC S. PEAR	Term expires 1901.
. . . .	Term expires 1902.

ISAAC S. PEAR . . . . *Clerk.*

Fence Viewers.

Colin Chisholm, . . .	343½ Broadway.
Lewis M. Hastings, . . .	City Hall.
William H. Gray, . . .	City Hall.

Park Department — Park Commissioners.

George Howland Cox . . *President.*

Term, three years.

William M. Richardson . .	Term expires 1899.
Edmund Reardon . . .	Term expires 1900.
George Howland Cox . .	Term expires 1901.

Howard E. Whiting, *Clerk of the Board and General Superintendent.*

Office Hours: 8 A. M. to 4 P. M.

Office, Room 10, City Hall. Telephone 650.

Sinking Fund Department — Commissioners of the Sinking Funds.

Charles H. Saunders . . *Chairman.*

Term, three years.

John C. Bullard . . .	Term expires 1899.
George H. Howard . . .	Term expires 1899.
Andrew J. Lovell . . .	Term expires 1900.
J. Henry Russell . . .	Term expires 1900.
Frank A. Allen . . .	Term expires 1901.
Charles H. Saunders . .	Term expires 1901.

John McDuffie	*Secretary.*
William W. Dallinger . .	*Treasurer.*

Overseers of the Poor Department — Overseers of the Poor.

William W. Burrage . . . *Chairman.*

Term, five years.

William W. Burrage . . .	Term expires 1899.
Charles Bullock . . .	Term expires 1900.
Charles Walker . . .	Term expires 1901.
Stephen Anderson . . .	Term expires 1902.
Alexander Millan . . .	Term expires 1903.

David P. Muzzey . . .	*Secretary.*
Vespasian Danforth . . .	*Visitor.*

Martin L. Eldridge, *Superintendent of Almshouse.*

Office Hours (at Central Square Building): 8 A.M. to 4 P.M.

Telephones: { Office, 522-3. / Almshouse, 29 Arlington.

Trustees of Dowse Institute.

FRANK A. ALLEN . . . *President.*

EDGAR R. CHAMPLIN . . . *Mayor, ex officio.*
WILLIAM F. BROOKS, *President of Common Council, ex officio.*
GEORGE HOWLAND COX. WILLARD A. BULLARD.
FRANK A. ALLEN.

GEORGE HOWLAND COX . . *Secretary.*

Trustees of Sinking Funds of Water Loan.

EDGAR R. CHAMPLIN . . . *Mayor,*
WILLIAM F. BROOKS . . . *President of Common Council,*
WILLIAM W. DALLINGER . . *City Treasurer,*
Ex officiis.

Trustees of the { Sanders Temperance Fund. / Bridge Charitable Fund.

The Mayor, the President of the Board of Aldermen, and the President of the Common Council,
Ex officiis.

Police Department.

Chief of Police.

LOTHROP J. CLOYES.

Deputy Chief.

WILLIAM F. BATCHELDER.

Clerk.

CHARLES W. PRIEST.

Captains of Police.

DISTRICT I.	DISTRICT II.	DISTRICT III.
MARK J. FOLSOM.	FREDERICK B. PULLEN.	JOHN F. MURRAY.

Chief Inspector.

Capt. JAMES E. MURRAY.

Assistant Inspector.

Lieut. HENRY C. JONES.

Sergeants of Police.

DISTRICT I.	DISTRICT II.	DISTRICT III.
DANIEL CALLAHAN.	JAMES S. ALEXANDER.	CHARLES L. PIKE.
ANDREW SPROUL.	MICHAEL J. CONRY.	WILLIAM MULLETT.
DAVID A. STEVENS.		

Patrolmen.

(With Badge and Hat Numbers.)

DISTRICT I.

No. of Badge.		Hat No.	No. of Badge.		Hat No.
51	Aylward, Richard H.	123	67	Leahy, Dennis F.	105
7	Barrington, George T.	107	44	Marston, Charles C.	130
28	Belcher, Edward F.	128	55	Maloy, John P.	126
53	Blen, Elbridge S.	113	10	McBride, John J.	110
69	Brennan, Michael J.	131	27	McCann, Charles J.	141
22	Campbell, Thomas M.	122	1	McCrehan, John E.	101
20	Corcoran, Timothy	120	18	McNulty, James E.	118
25	Comerford, Edward J.	125	45	Murray, Patrick F.	133
66	Cox, James A.	119	85	Presho, Charles H.	109
40	Doyle, Patrick	112	62	Roper, Bernard J.	134
8	Furbush, Joseph H.	108	6	Shackford, Leonard	106
2	Graves, William H.	102	21	Smyth, George	121
49	Hiscock, Simon D.	140	24	Temple, Joseph C.	124
47	Hixon, Robert T.	104	42	Wells, John H.	114
58	Holt, James H. H.	111	80	Welch, Edward J.	127
17	Jewett, Dexter	117	3	White, Orrin B.	103
32	Keaney, James M.	132	48	Winslow, John E.	115
35	Ladd, Fred L.	135			

DISTRICT II.

No. of Badge.		Hat No.	No. of Badge.		Hat No.
56	Coulter, John	203	72	McCaffrey, Bernard	215
34	Culhane, Michael	216	26	McElroy, James L.	226
68	Deehan, John W.	202	13	McKeen, Benjamin	213
50	Dynan, Thomas F.	222	15	McKeown, William	230
86	Ellis, Frederick M.	232	64	McMennimen, William H.	218
74	Forristall, James B.	207	43	Mullen, Robert E.	210
38	Ginty, Michael A.	209	4	Neilon, Michael	204
81	Gordon, Herbert	211	89	Parks, Joseph W.	205
41	Griffiths, John J.	225	59	Real, Thomas J.	229
82	Hackett, Mortimer M.	208	70	Robinson, Fred A.	217
77	Hezlitt, John A.	221	31	Robertson, William H.	231
14	Higgins, Benjamin F.	214	73	Rowe, Thomas P.	220
95	Hill, William H.	233	78	Rowe, William H.	201
33	Howe, William H. H.	212	65	Shaughnessy, John E.	206
23	Law, Frederick W.	223	61	Sullivan, Cornelius	227
16	McCabe, Edward J.	228	54	Wiley, John	224

DISTRICT III.

No. of Badge.		Hat No.	No. of Badge.		Hat No.
60	Aberle, Charles F.	303	76	Mullins, William N.	306
5	Apel, Frederick	305	75	Mulvaney, Simon J.	318
71	Counihan, Daniel F.	312	83	Rice, Ralph R.	311
9	Hall, James P.	309	19	Scully, Benjamin C.	307
37	Hurley, Patrick F.	310	46	Scobey, Frank W.	301
87	Kelleher, John	313	63	Skelley, John W.	308
30	McCarthy, Jeremiah	314	57	Walsh, David F.	316
39	McCorry, Joseph F.	304			

Reserve Officers.

88	Mahoney, George J.	234	98	Aberle, William H.	142
36	Dunlea, Patrick F.	136	91	Leahy, Timothy F.	139
79	Wyman, Charles W.	137			

Drivers of Patrol Wagons.

DISTRICT II.	DISTRICT III.
John T. Cook.	John Sullivan.
John McCauley.	John Coffey.

Ambulance Drivers.

Dow, Warren H.	Sherman, George E.

Matrons.

Mrs. E. S. Haines.	Mrs. A. M. Stearns.

Keeper of Lock-ups.

Lothrop J. Cloyes.

Person to receive Information of Damages by Dogs.

(Ch. 454, Acts 1889.)

Lothrop J. Cloyes.

Truant Officers.

Lucian S. Cabot.	Francis M. Mason.
John Carmichael.	William H. Porter.

Constables.

James A. Brown.	John T. Lynch.
Stephen V. A. Carey.	John Mahady.
James H. Cox.	John F. Murphy.
John Foster.	John Pehrson.
Joseph Fox.	J. Edwin Price.
Frank H. Hager.	John J. Rafferty.
Walter F. Hayward.	Frank E. Shaw.
Warren Ivers.	John T. Shea.
Frank H. Lambert.	Arthur M. Stewart.
James E. Lennon.	Edward M. Williams.
John T. Loughrey.	

Undertakers.

Stephen Anderson.
David F. Corcoran.
John W. Coveney.
Daniel P. Danehy.
Arthur S. Fudge.
David Fudge.
Edward J. Fudge.
George H. Kelley.
Joseph J. Kelley.
C. Henry Lockhart.
Abiel E. Long.
George W. Long.
Horace D. Litchfield.
Judson Litchfield.
James F. Mullen.
George F. Ricker.
John J. Ross.
William Ross, Jr.
Daniel P. Shea.
James J. Shea.
John T. Shea.
Michael J. Shea.
Ralph Smith.
William Stinson.
William A. Taylor.
Benjamin F. Wyeth.
Henry A. Wyeth.

Auctioneers.

John J. Ahern.
Robert C. Baxter.
Daniel A. Buckley.
Wilbur S. Clarke.
John W. Coveney.
Patrick Crowley.
Henry J. Cunningham.
Watson G. Cutter.
Jeremiah F. Donovan.
William R. Ellis.
Paul Epstein.
Frederic D. Fisk.
Max Frankenstein.
William L. Frankenstein.
Leander M. Hannum.
Edward R. Harris.
Daniel J. Hayes.
Stephen H. Harrington.
Frank L. Howe.
John A. Kelleher.
William Kelley.
Samuel R. Knights.
Frank H. Lambert.
Frank M. Lawrence.
James E. Lennon.
Henry L. Marcy.
John B. McKenna.
John F. Murphy.
Henry C. H. Parker.
Charles L. Phillips.
Timothy A. Scott.
Thomas C. Scottron.
Frank E. Shaw.
Fred W. Sleeper.
Thomas W. Spencer.
Francis Traynor.
Walter C. Wardwell.
Bartholomew M. Young.

Field Drivers.

Charles F. Aberle.
William H. Aberle.
Richard H. Aylward.
Frederick Apel.
George T. Barrington.
Edward F. Belcher.
Elbridge S. Blen.
Michael J. Brennan.
Thomas M. Campbell.

Michael J. Conry.
Timothy Corcoran.
James A. Cox.
John Coulter.
Michael Culhane.
Edward J. Comerford.
Daniel F. Counihan.
Thomas F. Dynan.
John W. Deehan.
Joseph J. Donahoe.
Patrick Doyle.
Patrick F. Dunlea.
Frederick M. Ellis.
James B. Forristall.
Joseph H. Furbush.
Michael A. Ginty.
Herbert Gordon.
Wiliam H. Graves.
John J. Griffiths.
Frederick W. Gustinger.
Mortimer M. Hackett.
James P. Hall.
John Hezlitt.
Benjamin F. Higgins.
William H. Hill.
Robert T. Hixon.
James H. H. Holt.
William H. H. Howe.
Patrick F. Hurley.
Henry C. Jones.
Dexter Jewett.
James M. Keaney.
John Kelliher.
Fred L. Ladd.
Frederick W. Law.
Dennis F. Leahy.
Timothy F. Leahy.
George J. Mahoney.
Charles C. Marston.
John P. Maloy.
Edward J. McCabe.
Bernard McCaffrey.
John J. McBride.
Joseph F. McCorry.
Jeremiah McCarthy.
John E. McCrehan.
Charles J. McCann.
James L. McElroy.
William F. McKeown.
William H. McMenimen.
James E. McNulty.
Robert E. Mullen.
William N. Mullins.
Simon J. Mulvaney.
Patrick F. Murray.
Michael Neilon.
Joseph W. Parks.
George A. Patten.
Charles H. Presho.
Thomas J. Real.
Ralph R. Rice.
Bernard J. Roper.
Frederick A. Robinson.
William H. Robertson.
Thomas P. Rowe.
William H. Rowe.
Frank W. Scobey.
Benjamin C. Scully.
John E. Shaughnessy.
John W. Skelley.
George Smyth.
Cornelius Sullivan.
Joseph C. Temple.
David H. Walsh.
Edward J. Welch.
John H. Wells.
Orrin B. White.
John Wiley.
John E. Winslow.
Charles W. Wyman.

Measurers of Wood and Bark.

Robert D. Carter.
Herbert T. Lawrence.
Charles H. Leland.
Robert A. Parry.
Joseph P. Quilty.
George Stephens.

Pound Keeper.

Robert Holden.

Committee for the Preservation of Fish.

Edwin C. Brooks.
Lewis M. Hastings.
Theodore L. Pike.

Weighers of Coal.

Clarence G. Bartlett.
Eugene A. F. Bartnett.
Hiram W. Brooks.
Silas E. Buck.
Robert D. Carter.
James W. Coleman.
Ernest P. Cook.
Warren Crane.
Stanley Jennison.
Charles H. Lealand.
Harry W. Marston.
John Moynahan.
Walter H. Nay.
Winslow S. Pierce.
David Proudfoot.
David C. Proudfoot.
George H. Rugg.
George M. Smith.
Charles Turner.

Inspectors of Junk Shops, Pawnbrokers' Shops, and Second-hand Stores and Dealers.

Mark J. Folsom.
John F. Murray.
James E. Murray.
Frederick B. Pullen.

Public Weighers.

Robert C. Bird.
Ernest E. Bradbury.
Edward J. Carroll.
Isaac A. Chandler.
Arthur B. Dodge.
James A. Ferguson.
Alexander S. Ford.
John M. Guiney.
Robert Holden.
Nathan H. Holbrook.
Edward F. Mahady.
William Maloney.
Fred W. McFarland.
Melvin McFarland.
John F. Reilly.
William C. Reycroft.
Thomas H. Shea.
John M. Thayer.
James A. Whelan.

Hay Weigher.

Edmund I. Train.

Inspector of Pressed or Bundled Hay or Straw.

Harvey O. Titus.

Measurer of Grain.

Albert F. Roberts.

Person

To seize all baskets, measures or vessels used or intended to be used in measuring Charcoal, as provided in Sect. 88, Chap. 60, P. S.

Albert F. Roberts.

Measurer and Surveyor.

Henry L. Hale.

Surveyor of Mechanics' Work.

Charles A. Mason.

Persons to Cause to be Properly Interred the Bodies of Soldiers and Sailors.

John Donelan. William H. Eveleth.
Eben W. Pike. Alphonzo M. Lunt.

Assistant Assessors.

Ward 1. Warren Ivers.
Ward 2. George H. Munroe.
Ward 3. Daniel B. Shaughnessy.
Ward 4. Arthur M. Stewart.
Ward 5. Robert A. Parry.

CITY ELECTION

DECEMBER 13, 1898

Votes cast for City Officers, on the License Question, and on the Question of Pensioning Firemen, as corrected by Recounts

Ward and Precinct.	Mayor.				License.			Pensioning Firemen		
	Whole Number.	Edgar R. Champlin.	Scattering.	Blank.	Yes.	No.	Blank.	Yes.	No.	Blank.
Ward 1, Precinct 1.	307	200	9	98	104	174	29	188	44	75
" 1, " 2.	320	199	8	113	106	188	26	203	54	63
" 1, " 3.	281	185	6	90	159	98	24	188	42	51
" 1, " 4.	225	166	12	49	33	182	10	135	36	54
" 1, " 5.	365	270	13	80	43	297	25	222	49	94
Ward 1, Totals...	1,498	1,020	48	430	445	939	114	936	225	337
Ward 2, Precinct 1.	594	353		241	365	147	82	353	83	158
" 2, " 2.	366	265	3	98	150	172	44	236	55	75
" 2, " 3.	221	151	2	68	110	75	36	116	44	61
" 2, " 4.	324	261	2	61	82	217	25	204	66	54
" 2, " 5.	406	340	7	59	48	341	17	230	107	69
" 2, " 6.	347	243	2	102	136	181	30	226	43	78
" 2, " 7.	503	385		118	131	348	24	316	94	93
Ward 2, Totals...	2,761	1,998	16	747	1,022	1,481	258	1,681	492	588
Ward 3, Precinct 1.	393	268		125	218	105	70	214	52	127
" 3, " 2.	429	307	1	121	226	138	65	246	62	121
" 3, " 3.	397	249	4	144	231	88	78	256	44	97
" 3, " 4.	335	216		119	197	90	48	197	49	89
Ward 3, Totals...	1,554	1,040	5	509	872	421	261	913	207	434
Ward 4, Precinct 1.	201	151		50	59	116	26	125	38	38
" 4, " 2.	237	185	3	49	66	149	22	157	41	39
" 4, " 3.	213	151	2	60	82	119	12	138	40	35
" 4, " 4.	333	253	2	78	50	258	25	189	69	75
" 4, " 5.	247	208	5	34	58	179	10	162	41	44
" 4, " 6.	299	241	2	56	47	236	16	182	56	61
" 4, " 7.	251	190	6	55	91	134	26	148	50	53
" 4, " 8.	253	184	7	62	84	145	24	158	43	52
Ward 4, Totals...	2,034	1,563	27	444	537	1,336	161	1,259	378	397
Ward 5, Precinct 1.	269	209	4	56	25	235	9	145	58	66
" 5, " 2.	319	233	4	82	115	180	24	206	49	64
" 5, " 3.	324	250	2	72	69	240	15	195	65	64
" 5, " 4.	314	231		83	138	141	35	183	58	73
Ward 5, Totals...	1,226	923	10	293	347	796	83	729	230	267
Grand Totals	9,073	6,544	106	2,423	3,223	4,973	877	5,518	1,532	2,023

Aldermen.

Ward and Precinct.	Names of Candidates.														
	John J. Ahern.	Hans L. Carstein.	Jeremiah F. Donovan.	Eben H. Goggins.	Isaac McLean.	Clement G. Morgan.	Hamilton H. Perkins.	George E. Saunders.	John T. Shea.	John E. Smith.	Warren F. Spalding.	Walter C. Wardwell.	George B. Whitmore.	Scattering.	Blank.
Wd. 1, Prec't 1	226	181	204	186	206	178	178	202	201	133	182	212	70	1	1,017
" 1, " 2	211	189	192	183	207	191	183	212	190	119	200	239	87	1	1,116
" 1, " 3	200	95	192	106	147	92	96	108	188	190	94	188	71		1,324
" 1, " 4	163	150	150	155	156	150	153	169	137	79	161	177	56		619
" 1, " 5	236	250	227	234	247	240	241	288	204	96	247	272	85	6	1,142
Wd. 1, Totals..	1,036	865	965	864	963	851	851	979	920	617	884	1,088	369	8	5,218
Wd. 2, Prec't 1	373	163	400	175	205	232	173	153	363	343	167	187	108		3,492
" 2, " 2	243	169	275	176	174	197	166	160	223	179	181	167	125		1,591
" 2, " 3	129	67	152	82	77	93	83	75	114	97	85	76	50		1,251
" 2, " 4	189	187	189	216	192	215	202	197	161	153	201	213	131		1,118
" 2, " 5	265	296	265	314	298	302	297	328	216	143	312	322	150	1	957
" 2, " 6	213	134	204	157	162	160	140	141	206	205	141	158	87		1,709
" 2, " 7	335	286	332	327	314	328	314	326	302	235	315	327	179	1	1,612
Wd. 2, Totals..	1,747	1,302	1,817	1,447	1,422	1,527	1,375	1,380	1,585	1,355	1,402	1,450	830	2	11,730
Wd. 3, Prec't 1	236	128	236	129	147	135	123	133	281	234	145	168	82		2,146
" 3, " 2	311	134	259	145	171	149	143	143	291	210	146	165	82	6	2,364
" 3, " 3	263	119	248	113	150	114	113	104	255	241	126	151	90	1	2,279
" 3, " 4	245	108	207	108	121	124	115	117	223	157	126	138	63	1	1,832
Wd. 3, Totals..	1,055	489	950	495	589	522	494	497	1,050	842	543	622	317	8	8,621
Wd. 4, Prec't 1	124	96	112	119	104	110	113	102	104	116	113	99	78		821
" 4, " 2	131	128	125	168	130	137	144	140	108	106	156	150	111		873
" 4, " 3	144	96	134	131	105	103	119	98	143	107	119	102	82	2	858
" 4, " 4	228	204	180	233	229	211	233	229	165	164	230	224	186		948
" 4, " 5	142	157	119	187	158	150	168	167	116	112	175	167	139		760
" 4, " 6	168	193	144	234	198	208	229	226	140	118	229	217	142		843
" 4, " 7	174	106	168	150	123	110	115	106	160	138	130	128	82	2	1,069
" 4, " 8	143	124	130	158	133	128	133	126	131	111	150	145	116		1,055
Wd. 4, Totals..	1,254	1,104	1,112	1,380	1,180	1,157	1,254	1,194	1,067	972	1,302	1,232	936	4	7,227
Wd. 5, Prec't 1	187	214	164	190	209	191	206	219	159	72	211	216	77		644
" 5, " 2	244	221	229	183	235	172	194	189	221	146	180	205	74		1,016
" 5, " 3	199	249	168	185	238	176	185	198	163	126	192	219	99		1,167
" 5, " 4	236	157	220	120	243	104	112	106	225	138	120	131	70		1,472
Wd. 5, Totals..	866	841	781	678	925	643	697	712	768	482	703	771	320		4,299
Grand Totals..	5,958	4,601	5,625	4,864	5,079	4,700	4,671	4,762	5,390	4,268	4,834	5,163	2,772	22	37,095

Candidates for Common Council.

WARD ONE.

Precincts.	William F. Brooks.	Henry P. Fielding.	James D. Hill.	John D. Merrill.	Thorndike Spalding.	Scattering.	Blank.
Precinct 1	238	62	211	198	200	1	318
" 2	220	74	229	196	202		359
" 3	162	103	193	124	86		456
" 4	170	50	167	170	158		185
" 5	273	73	254	250	254	4	352
Totals	1,063	362	1,054	938	900	5	1,670

WARD TWO.

Precincts.	William J. Campbell.	Fred A. Ferris.	Oscar A. Johnson.	Albert B. Long.	James J. Malley.	Edward F. McKenna.	Frank McLaughlin.	William M. Wadden.	Scattering.	Blank.
Precinct 1	166	151	80	125	372	170	430	190		1,286
" 2	159	131	113	140	156	126	171	180	1	653
" 3	70	79	83	61	80	59	98	80		495
" 4	161	155	112	166	127	102	79	158	1	559
" 5	185	276	122	311	200	155	88	265	1	427
" 6	129	116	57	105	154	133	204	157		680
" 7	222	275	109	288	260	234	176	297		654
Totals	1,092	1,183	676	1,196	1,349	979	1,246	1,327	3	4,754

Candidates for Common Council — Continued.

WARD THREE.

Precincts.	James T. Barrett.	James A. Brown.	George H. Dinan.	Frederick A. Gilligan.	Henry F. Lehan.	William H. Quinn.	William Ward.	Scattering.	Blank.
Precinct 1	118	236	253	153	182	172	73		385
" 2	150	233	210	225	198	189	66	2	443
" 3	131	196	175	165	274	210	73		364
" 4	142	162	134	193	169	184	39		317
Totals	541	827	772	736	823	755	251	2	1,509

WARD FOUR.

Precincts.	Edgar P. Baker.	Fred L. Beunke.	Timothy W. Good.	Charles R. Greco.	Alfred E. Hughes.	William J. Rounds.	Scattering.	Blank.
Precinct 1	107	106	109	82	98	85	1	417
" 2	147	173	113	124	132	141		355
" 3	95	126	120	111	97	130		386
" 4	219	262	157	183	204	252		388
" 5	162	189	116	130	139	166		333
" 6	200	248	107	169	193	200	2	376
" 7	90	130	171	111	96	93	6	558
" 8	130	132	144	105	132	115	1	506
Totals	1,150	1,366	1,037	1,015	1,091	1,182	10	3,319

Candidates for Common Council — Concluded.

WARD FIVE.

Precincts.	Daniel P. Danehy.	Albert H. Hall.	William H. Lewis.	Blank.
Precinct 1	56	207	183	92
" 2	149	175	149	165
" 3	110	194	171	173
" 4	242	98	73	215
Totals	557	674	576	645

Candidate for Assessor.

Ward and Precinct.	Andrew J. Green.	Scattering.	Blank.
Ward 1, Precinct 1	201		106
" 1, " 2	173		147
" 1, " 3	139		142
" 1, " 4	173		52
" 1, " 5	259		106
Ward 1, Totals	945		553
Ward 2, Precinct 1	230		364
" 2, " 2	208		158
" 2, " 3	96		125
" 2, " 4	224		100
" 2, " 5	322		84
" 2, " 6	180		167
" 2, " 7	339		164
Ward 2, Totals	1,599		1,162
Ward 3, Precinct 1	213		180
" 3, " 2	225		204
" 3, " 3	211		186
" 3, " 4	179		156
Ward 3, Totals	828		726
Carried forward	3,372		2,441

Ward and Precinct.	Andrew J. Green.	Scattering.	Blank.
Brought forward	3,372		2,441
Ward 4, Precinct 1	126		75
" 4, " 2	158		79
" 4, " 3	115		98
" 4, " 4	239		94
" 4, " 5	179		68
" 4, " 6	216		83
" 4, " 7	134		117
" 4, " 8	132	1	120
Ward 4, Totals	1,299	1	734
Ward 5, Precinct 1	211		58
" 5, " 2	209	1	109
" 5, " 3	205		119
" 5, " 4	158		156
Ward 5, Totals	783	1	442
Grand Totals	5,454	2	3,617

Candidates for School Committee.

Ward 1. For 3 years.			Ward 2. For 3 years.			Ward 3. For 3 yrs.		Ward 4. For 3 yrs.		Ward 5. For 3 years.			Ward 4. For 1 yr.		Ward 5. For 1 year.		
Elizabeth Q. Bolles.	Scattering.	Blank.	George W. Bicknell.	Scattering.	Blank.	Carrie S. Fairbairn.	Blank.	Robert E. Ely.	Blank.	Frederic W. Taylor.	Scattering.	Blank.	Mary E. Mitchell.	Blank.	Seth N. Gage.	Scattering.	Blank.
203		108	180		131	181	130	179	132	172		139	166	145	159		152
222		109	180	1	150	186	145	179	152	175		156	167	164	158		173
122		162	109		175	110	174	100	184	88		196	101	183	78		206
173		60	160		73	162	71	165	68	156		77	153	80	146		87
290		88	268		110	255	123	256	122	263		115	247	131	243		135
1010		527	897	1	639	894	643	879	658	854		683	834	703	784		753
161		435	172		424	198	398	133	463	132		464	151	445	113		483
184		185	195		174	181	188	156	213	146		223	148	221	144		225
79		144	92		131	76	147	68	155	65		158	69	154	56		167
209		122	234		97	196	135	199	132	181		150	195	136	175		156
328		96	365		59	325	99	331	93	312		112	312	112	299		125
134		216	169		181	151	199	129	221	123		227	131	219	110		240
308		204	358		154	310	202	308	204	293		219	287	225	276		236
1403		1402	1585		1220	1437	1368	1324	1481	1252		1553	1293	1512	1173		1632
141		255	123		273	193	203	106	290	111		285	116	280	104		292
145		287	142		290	205	227	129	303	137		295	130	302	111		321
112		285	109		288	180	217	94	303	97		300	104	293	86		311
125		213	107		231	167	171	93	245	99		239	101	237	79		259
523		1040	481		1082	745	818	422	1141	444		1119	451	1112	380		1183
106		96	105		97	97	105	113	89	90		112	100	102	84		118
139		101	156		84	143	97	158	82	128		112	142	98	118		122
112		103	117		98	120	95	122	93	94		121	110	105	95		120
247		94	245		96	214	127	233	108	216		125	235	106	198		133
174		76	179		71	162	88	175	75	154		96	158	92	145		105
214		96	242		68	213	97	232	78	201		109	212	98	191		119
110		145	112		143	112	143	131	124	108		147	117	138	88		167
137	1	122	145		115	131	129	149	111	113	1	146	127	133	104		156
1239	1	833	1301		772	1192	881	1313	760	1104	1	968	1201	872	1023		1040
210		67	220		57	204	73	208	69	226		51	189	88	199		78
203		123	198		128	190	136	186	140	212	1	113	174	152	180	1	145
190		147	195		142	181	156	186	151	228		109	176	161	210		127
121		195	121		195	122	194	114	202	133		183	112	204	133		183
724		532	734		522	697	559	694	562	799	1	456	651	605	722	1	533
4899	1	4334	4998	1	4235	4965	4269	4632	4602	4453	2	4779	4430	1404	4082	1	5141

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